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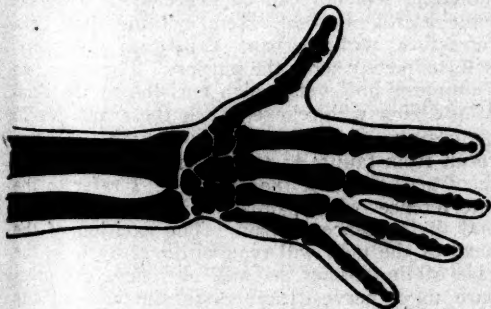
## ORIGINAL ARTICLES.

### SHORTENING OF THE RADIUS IN COLLES' FRACTURE.\*

BY GEORGE RYERSON FOWLER, M.D.,  
OF NEW YORK.

THE causes of impacted fracture at the lower end of the radius are those of impacted fracture in general; namely, the application of the vulnerating force in the direction of the long axis of the bone. If the impact is such as to pass in a practically undeviating line through the center of the cancellous mass forming the lower end of the bone, and the force is distributed evenly, the vulneration takes place somewhere between the point where the impact is first received and the more solid and resisting shaft of the bone.

It is now generally admitted that a fall upon the palmar surface of the dorsally flexed (extended) hand is the common cause of Colles' fracture. The belief that the fracture was al-



ways caused by avulsion, the strong carporadial ligament offering greater resistance than its bony attachments, only took into account those cases in which the metacarpus and phalanges acted as a lever during forced dorsal flexure (extension), with the carporadial ligament as an extension of this lever, and the base of the radius as a fulcrum. Under these circumstances the force is applied through the medium of the lever and thence, through the extension of the latter, to the point of least resistance in the line of the applied force; namely, a point close to the anterior surface of the base of the radius. There is no classical Colles' fracture. An injury to the lower end of the radius may consist of a tearing off of a slight spicula of bone by the strong carporadial ligament; an avulsion of the entire articular surface by the same mechanism; a fracture with marked displacement and resulting deformity anywhere between the articular surface and the shaft; or lastly an impacted fracture, the im-

paction taking place in such close coincidence with the normal line of the bone that there is practically no deformity of the contour of the latter, the sole displacement being the driving of one fragrant into the substance of the other and resulting shortening.

But to say that there is no deformity of the wrist itself in cases of impacted fracture of the lower end of the radius would be far from true. There is a deformity of the wrist, and this is quite characteristic of the shortening of the radius invariably present under these circumstances. This deformity relates more particularly to the lower end of the ulna, and consists in a diastasis of the radio-ulnar articulation, with a relative downward and positive forward displacement of that portion of the bone. The downward displacement is only relative, since through loss of support of the base of the radius and the action of the muscular structures the hand approximates more closely to the forearm. As this occurs the ulna is forced to accommodate itself to the new relations of the hand to the lower end of the bones of the forearm. The radio-ulnar ligaments necessarily become either stretched or ruptured in the ascent of the impacted lower extremity of the radius. With the rupture of the posterior radio-ulnar ligament, and in some instances the internal lateral ligament as well, the ulna is no longer supported in its position, inasmuch as the posterior ligament has its superior attachment to the radius alone, and hence the head of the former is forced forward by the impingement of the corresponding portion of the carpus. With the shortening of the radius there also occurs in addition to the anterior displacement of the head of the ulna a more or less pronounced radial flexion (abduction) of the hand upon the forearm. Should both the anterior and posterior radiocarpal ligaments give way, as not infrequently happens, inward displacement of the ulna and consequent widening of the wrist follow.

This upward displacement of the lower fragment, whether from impaction or from displacement in one or another of the usual directions, leads to shortening of the radius and consequent elevation of the radial styloid. This is such a constant feature of Colles' fracture in general that it has come to be looked upon as a diagnostic feature of the injury, inasmuch as the normal half-inch difference in the level of the two processes is destroyed. (Fig.)

Interference with the function of the hand varies considerably in these cases, but there is always a bar to complete palmar flexion of the wrist. This is sometimes sufficiently pronounced to compel the patient to keep the hand in the straight position, or midway between dorsal and

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palmar flexion (extension and flexion), or to permit slight dorsal flexion only.

Pain is often a prominent symptom in this class of cases. It is not, as a rule, confined to the ulnar side of the hand, but is distributed over the latter, and to the neighborhood of the wrist as well. Its presence and distribution are due to pressure upon the cutaneous branch of the ulnar nerve which communicates with branches of the median nerve. Pain in the entire arm and forearm may result from pressure upon the first branch of the cutaneous, which pierces the deep fascia near the wrist and gives off a branch almost directly opposite the displaced head of the ulna, and communicates with the internal cutaneous. This symptom of pain in the arm is relatively infrequent, owing to the fact that this branch of the cutaneous branch of the ulnar is sometimes absent.

If, in the treatment of Colles' fracture, sufficient force can be brought to bear to overcome the deformity at once, and pains be taken to maintain the normal position of the ulna by a sufficiently hard and properly applied pad placed on the palmar side of the head of the ulnar; and if, in addition, early massage and movements of the fingers, both active and passive, be employed, the very best results can be obtained in the great majority of cases. In the application of this pad it is my habit to use a tightly rolled portion of an ordinary muslin roller bandage. The pad is about the diameter and length of the little finger. To prevent it from slipping it is covered with a piece of adhesive plaster folded in such a manner before applying that it presents an adhesive surface to the skin as well as to the roll. An anesthetic should always be employed in the reduction, and the normal length of the radius restored when possible. The ulna is now forced into place and the roll placed upon the palmar surface to retain the reduction. This is held in place by several turns of adhesive plaster, the width of which corresponds to the length of the roll. The edges of the adhesive plaster are nicked to prevent these from sinking into the skin should swelling occur subsequently. The arm is placed in a sling with the hand dependent, so as to maintain the latter in a position of ulnar flexion (abduction).

The dressing above described is essentially that of Moore of Rochester. Besides meeting all the indications, it presents the advantage of being always available and of permitting movements, both active and passive, as well as the use of early massage.

In spite of every effort, however, in a certain proportion of cases it will be found impossible to effect complete reduction either of the fracture itself or of the displaced ulna. Upon removal of the dressings the ulna will fall forward almost, if not quite, to the position which it occupied before its reduction. This usually occurs at once. If it is delayed this delay is due to incomplete repair of the posterior radio-ulnar ligament. Such cases, however, are rare. In the great majority of

cases the essential feature of the displacement of the ulna is the shortening of the radius.

In the treatment of cases in which the deformity resulting from failure to reduce the displaced ulna is of sufficient importance, whether from the standpoint of impairment of function, the presence of pain, or for reasons pertaining to the presence of the deformity pure and simple, for several years past I have practised removal of the head of the ulnar through an incision made along its inner border. The operation is performed subperiosteally, the section of the bone being made by the Gigli wire-saw. The amount of bone to be removed will depend upon the amount of impaction of the fragments of the radius, and consequent shortening of the latter.

In cases in which the alignment of the radius is but slightly disturbed, the displacement of the lower fragment being entirely in an upward direction, and this at the expense of its cancellous tissue into which the upper fragment is crushed, this operation will be found to fulfil all the indications of improvement of function, relief of pain, and correction of deformity. In cases, however, in which the impaction is slight, the shortening being due to either an angular deformity or a bowing of the radius at the point of fracture, it neither will nor can be expected to serve the same useful purpose. Here, nothing short of a refracture, with, perhaps, cuneiform osteotomy, will completely serve the purpose. There are two symptoms, however, which excision of the head of the ulna will relieve, when these are due to malposition of the ulna, even though the latter result from failure to reduce an angular displacement at the site of the fracture. I refer to the interference with palmar flexion of the wrist, and the presence of pain. The excision of the head of the ulna will remove the obstacle in the case of the former, as well as relieve the pressure upon nerve-structures in the case of the latter. Furthermore, in those cases in which the shortening of the radius is sufficient to produce marked radial flexion (abduction) of the hand, the removal of the head of the ulna, by relieving this distortion, will permit greater freedom of action of the flexors of the fingers.

#### REPORT OF NINETY CASES OF TYPHOID FEVER IN INFANTS AND CHILDREN.\*

BY ISAAC A. ABT, M.D.,  
OF CHICAGO.

THIS report consists of a study of 90 cases of typhoid fever, conducted for the most part in the children's ward of the Michael Reese Hospital. A few of the cases occurred in my private practice. The report covers a period of three years.

The children were largely of Russian parentage. A history of conditions previous to the onset and prior to admission to the hospital was not always obtainable, a source of error in these

\* Read at the meeting of the Illinois State Medical Society, May, 1902.



histories being frequently the difficulty in obtaining accurate data from parents.

During the three years in which the cases were collected there was no particular epidemic of the disease. In the winter and early spring even single cases were rare; but during the month of June a few cases came in; the number increased in July, and by far the largest number were admitted during the months of August and September. From this time on a few cases occurred until December 1.

*Age of Occurrence.*—Even in recent times it has been maintained that typhoid fever in children under two years of age was of extremely uncommon occurrence. De Grassicourt<sup>1</sup> in 276 cases of typhoid found only three cases in children as young as two years. Vogel<sup>2</sup> collected 1,017 cases, only four of which occurred in the first year of life. Morse<sup>3</sup>, who has rendered great service by his classical report on this subject, found no case in a child as young as two years. Holt<sup>4</sup> has never seen a case in a child of two years of age. It must be remembered, however, that the clinical as well as the postmortem diagnosis of typhoid fever in very young children has often in the past been impossible. The Widal reaction has been of great service in enabling us to diagnose cases which previously passed for another disease, or were not diagnosed at all.

It can hardly be longer doubted that fetal typhoid can occur. Concerning this point Morse<sup>3</sup> summarizes as follows: "The typhoid bacillus probably enters directly into the circulation, causing a form of general septicemia; therefore the intestinal lesions in fetal typhoid are absent. The fetus usually dies in utero, or shortly after birth. The fetus may be born alive; if so, it is feeble, lives for a short time. Death usually occurs in a few days without definite symptoms. The fetus is not infected in every case."

In my series the youngest child was eight months old; one was seventeen months old; one, twenty-one months; five were two years old; five, four years; seven, five years; five, six years; six, seven years; five, eight years; seven, nine years; nine, ten years; seven, eleven years; the remainder were between twelve and fourteen years of age.

The eight-month-old patient was a male child. The mother and a brother two years old were in the hospital at the same time, ill with typhoid. The disease in this child of eight months was ushered in by fever and vomiting. Roseola over abdomen and buttocks was distinctly present a few days after admission. The spleen was enlarged; the temperature constantly high; the abdomen tympanitic. Diagnosis was made by the course of the disease, and positively confirmed by the Widal reaction. One other case, that of a child twenty-one months old, was fatal. The autopsy showed the usual abdominal and intestinal findings of typhoid in young children. The solitary and agminated follicles were swollen without ulceration. The mesenteric glands and

spleen were enlarged. This was the case in which multiple gangrene occurred. It has previously been made the subject of a special report.<sup>5</sup>

*Prodromata and Mode of Onset.*—The majority of the children were admitted after they had been ill a number of days, and for this reason accurate data as to prodromata and mode of onset were not obtainable. In the older children prodromal symptoms were usually present. In smaller children the onset was frequently abrupt. A sudden rise of temperature was recorded in all the cases of young children. Vomiting at the very beginning occurred 19 times in our series. Convulsions are said to occur rarely. In one of our cases the onset was thus marked. Diarrhea was present 10 times. Constipation was more frequent, occurring 16 times.

Headache was oftener complained of than any other single symptom except fever. At the beginning of the disease 42 patients complained of this symptom. Chill or chilliness was not infrequently recorded at the onset of the disease.

Epistaxis, which is said to be less frequent in children than in adults, occurred four times during the early days of the disease.

Delirium was once present. Pains in the abdomen and muscular pain were each present 13 times. Well-known symptoms, such as anorexia, prostration, malaise, nausea, insomnia and pharyngitis were frequently present during the prodromal and initial period of the disease.

*Pulse.*—The observation of the pulse confirmed the dictum of Gerhardt.<sup>6</sup> The younger children showed a rapid pulse, while older children followed the type of adults and had a slow pulse. In 15 of our cases, irregularity and intermittence of the pulse was noted for an uninterrupted period. In 42 cases it was above 120 during the febrile period. Excluding cases of collapse and one of perforation, the pulse never exceeded 150 per minute in any case. In one case a relative brachycardia was present during the febrile period, the pulse varying from 50 to 70 per minute. In 11 cases it varied between 88 and 100 per minute.

*Fever.*—It was a common observation that the temperature of the patient immediately after admission was a maximal one for that day, the fever frequently falling one or two degrees after the patient had been placed in bed. This reduction was partly to be explained by the bath which the patient received upon admission. The high initial temperature is due to the excitement and fatigue incident to the journey to the hospital, as well as to the unsuited environment and mismanagement of diet and hygiene previous to admission.

The study of the temperature records in our cases teaches us nothing new. The course of the fever was in almost every case of the remittent type. In not a few cases the disease was ushered in by a high temperature, 104° or 105° F. being not uncommon. In none of the cases did the temperature fall by crisis; it fell gradually in every case. The typical course of the fever was

changed by complications such as pneumonia, abscesses, etc. We were convinced that the temperature was affected by emotional excitement. Nearly all of the children showed a rise of temperature on visiting days, when parents and friends were admitted to the wards. This, however, had no permanent effect on the fever curve.

**Relapse.**—In nine cases, or 10 per cent., relapse occurred. Most of the relapses were mild and short attacks, although a few were severe and exceeded the primary attack in intensity and duration.

I have now under my care in the hospital a little patient who is suffering a second relapse; i.e., a third attack of the disease. The last relapse was preceded by 20 days of normal temperature and apparently complete recovery. During the relapse period the spleen again became enlarged and the roseola usually reappeared as in the primary attack. Of the children among my cases who suffered relapse none died.

**Nervous System.**—As has already been noted, the onset of the disease is frequently characterized by the occurrence of nervous symptoms. One of the commonest symptoms is headache. At this period convulsions are rare. Headache was complained of by 50 patients. With three it continued throughout the febrile period. In a large number of the milder cases apathy was manifest. These patients slept a great deal, but responded to questions. In older children delirium was commonly observed. This condition was very marked in 13 cases.

One little fellow, nine years old, who had been ill with a severe attack about five weeks all told, and of whom the parents spoke as having been bright previous to this illness, showed unmistakable signs of dementia after the appearance of the fever. He laughed or giggled in an idiotic way most of the time, and insisted on lying in bed uncovered and exposed. He took a fiendish delight in soiling the bed-clothes almost as fast as the nurses could change them, and masturbated unabashed in full sight of the nurses, internes and other patients.

Among the younger children, those under the fourth year manifested their nervous state by great restlessness and almost incessant crying. In two of the severe cases marked and persistent stupor was observed. In the severe types of the disease tremor of the extremities and tongue was commonly noticed. In two cases tremor of the tongue was persistently present. During the height of the fever, or during the period of defervescence and early convalescence, it was a common observation that the knee-jerk, as well as the abdominal and cremasteric reflexes, was increased. Ankle-clonus was frequently obtained during the same period. Meningeal symptoms were present in two cases. The histories of these cases are as follows:

P. L., aged three years, was taken suddenly ill with high fever. The temperature rose to 104° F., and remained more or less constant in character. He complained of excruciating headache,

and vomited frequently. He very soon passed into a comatose condition; there was extreme rigidity of the neck; continued high temperature, somewhat irregular pulse; the pupils were regular, and there was slight deviation of the eyes. The reflexes were increased, and ankle-clonus was present. The Kernig sign was marked. The Widal test was made on the second day of the disease and submitted to the municipal laboratory, whence a positive reaction on the third day was reported. The meningeal symptoms persisted unchanged. On this day Dr. Frank Billings saw the case in consultation with me. He suggested that another Widal reaction be made by the municipal laboratory. The report of this reaction was again positive. Dr. Billings again saw the case with me on the fifth day, and at this time the meningeal symptoms had entirely disappeared. The case presented all the characteristics of a typical typhoid. The disease ran an uneventful course from this time on, and the patient made an excellent recovery.

July 21, 1901. M. F., aged nine years. Born in Chicago of Russian parentage. Onset 10 days before entering hospital, marked by severe headache and violent vomiting. Headache gradually increased in severity and at the end of three days child was delirious and very irritable and restless. About this time the parents noticed rigidity of the limbs and neck. Child has some diarrhea. Past illnesses: No history. Family history: Parents and other members of the family well. No hereditary nervous or mental conditions known to exist. Environment: Lives under very unhygienic conditions; poor water, poor milk-supply and irregular food. Many cases of typhoid among neighbors. General appearance: Fairly well nourished boy, with appearance of extreme illness. Head: Long, peculiarly shaped. Pupils widely dilated; react to light. Mouth dry and brown. Tongue covered with brown fur and furrowed. Teeth bad. Throat: Dry and red. Considerable rigidity of neck. Thorax: Fair general development. Respirations shallow and somewhat irregular. Lungs: Negative, except harsh respiratory murmur and a few scattered, moist râles. Heart: Outline normal; apex fourth intercostal space, one cm. inside mammary line. Tone weak; soft systolic murmur over apex. Second pulmonary not loud. Pulse: Good quality, about 100. Not dicrotic. Abdomen: Spleen enlarged, sharp, hard edge, easily palpable under ribs. Liver slightly enlarged. Extremities negative. Genitalia negative. Nervous system: Marked acute delirium, maniacal in character. Muscles of extremities and neck rigid, and reflexes greatly exaggerated. Ankle-clonus very marked. Skin: Abundant crop of rose-spots; tache cérébrale easily elicited. Glands slightly enlarged. Urine: Trace of albumin and a few hyalin casts. Diazo reaction positive. Widal reaction positive. Blood-count: Whites, 3,000; reds, 2,800,000. The eye-grounds were examined and found to be negative. Lumbar puncture: Clear fluid, nothing in smears or



cultures. No result from injection into animals. When the patient had been in the hospital one week the meningeal symptoms disappeared. The case ran an uneventful typhoid course from this time on. His temperature became normal on the eighteenth day after admission and remained so from that time on. After a stay of 37 days in the hospital he was discharged fully recovered.

*Tongue.*—The tongue is described with dorsum white and tip and edges red in 36 cases; as covered with a dry, brownish fur in six cases, and as intensely red in one case. The white or grayish-white tongue with red border and tip is regarded as most characteristic for typhoid, though it is by no means always present. The appearance of the tongue is not always the same, but may change from day to day.

*Stomatitis.*—Stomatitis was observed in four cases, and gingivitis alone in one case. Infection of the mouth occurred in spite of the most scrupulous care. No symptoms were observed other than a local discomfort in the mouth, though the food was not so readily taken and an increased flow of saliva was observed.

*Herpes Labialis.*—Herpes labialis occurred in four cases. This condition has been thought to be very infrequent, although its occurrence is confirmed by numerous reports in recent literature.

*Epistaxis* occurred 16 times. In two cases there was excessive bleeding. In three cases it occurred during the prodromal period; in one, daily during the first week of the disease; in another it preceded by a day the appearance of the relapse. In one case it was severe and persistent and caused great exhaustion.

*Intestinal Symptoms.*—As has already been stated, constipation was frequent during the first days of the disease. Constipation occurred during the course of the disease in 36 cases, and daily enemata were necessary to unload the bowels. In seven cases, there was diarrhea during the first week, and frequently constipation existed throughout the remaining course of the disease. In 28 cases diarrhea occurred; in two it was slight; in three the stools were offensive, and in two it was severe. In 10 cases the bowels moved once or twice daily without assistance. The stools were not characteristic for typhoid. In the younger children the stools showed undigested milk-particles, were fluid, and contained a considerable quantity of mucus. Fecal impaction occurred in two cases, and in each during the period of convalescence, before the patient had been fed on solid food. In both these cases slight temperature occurred at the time, associated with tympany and a feeling of fulness and distress in the rectum. These cases were relieved by the manual extraction of the hardened and tenacious fecal masses.

*Hemorrhage.*—Intestinal hemorrhage occurred in five cases. In two cases it was slight, and in one it was moderately severe, occurring but once. In one case two distinct attacks of hemorrhage occurred. Hemorrhage is not so frequent in chil-

dren as in adults. It occurs most frequently at the end of the second week. The ages of the patients suffering from hemorrhage ranged as follows: Six years old, eighth day of relapse; ten years old, eleventh day of disease; twelve years old, seventh day of disease; ten years old, sixth day of disease; eleven years old, eighth day of disease. Two were girls and three boys.

Tympany was present in 55 cases, though it was rarely the severe type that is found in adults. Perforation occurred in one case. The history of the case is of great interest and is reported in full:

M. S., aged ten years, of Russian parentage, entered the hospital after an illness of three days, complaining of headache, malaise, anorexia and diarrhea. The eyes were bright and face flushed; tongue heavily coated and some hyperemia in the throat. The spleen was palpable two fingers below the costal arch.

On entrance the temperature was 102.8° F., pulse 128, and respiration 40. Temperature ranged between 98° and 104.2° F., with the morning remission and evening rise of one or two degrees, accompanied by a pulse varying between 84 and 130. With gradual decline, the temperature was normal on the sixteenth day after admission, and remained so for three days. In 27 hours it again rose to 103.8° F., and continued with the usual morning remission, accompanied by a pulse ranging from 100 to 160. On the thirty-third day after the relapse and on the fifty-fourth day after entering the hospital, at about midnight the patient complained of severe abdominal pain and vomited some curdled milk. The temperature during the previous day was about 102.4° F., at 9 P.M. it was about 102.6° F., and at 12 was 101° F., with a pulse of 136 and respiration 32. At 3 A.M. the temperature was 101° F., with a pulse of 180 and respiration 64. The patient was restless and presented the peculiar facies. The skin was cold and clammy. The abdomen was tympanitic and very tender. The radial pulse was almost imperceptible. At 5 A.M. the pulse was 160 and the respiration 48; at 6 A.M., temperature 104.8° F., pulse 176, respiration 44. At 8.30 A.M. the patient was taken to the operating-room for operation. Dr. E. Wyllys Andrews, the attending surgeon to the hospital, who was on duty, was summoned. A perforation in the small intestine, pencil-point in size, was found after opening the abdomen. The perforation occurred in the middle of an excavated area which was about the size of a five-cent piece. There was abundant evidence of beginning fibrinous plastic peritonitis in the neighboring coils of intestine. The ulcer was inverted and sewed, a Lambert suture being used. The peritoneal cavity was flushed with saline solution. The child showed considerable shock during the operation, and toward the end was almost pulseless. The abdominal wound was closed with silkworm gut and sealed with collodion. After returning the child to her bed active methods of stimulation

were employed. A saline infusion was given subcutaneously and hypodermics of strychnine and digitalin were also administered. At the time the patient was returned to her bed the pulse was 152. The highest pulse after the operation was 160, and respiration not above 48. The temperature fell rapidly from 103° F. at noon to 97° F. at midnight. It did not again rise above 100.2° F. until the eighteenth day after operation, when for several days she had evening temperature of 102° F., due to the development of abscesses on the extremities. The patient finally left the hospital on the ninety-fifth day after admission in excellent condition, having gained in weight, and being discharged as fully recovered.

The Widal reactions in this case were positive; the urinary findings were negative except for numbers of leucocytes and a slight albuminous reaction with Tanret's test. No casts were found.

**Liver.**—The liver was carefully examined in all of our cases. In 25 it was somewhat enlarged—in one case was markedly so. There was a condition of catarrhal cholangitis in one case that came to autopsy. More attention has recently been paid to the study of the liver and gall-bladder in typhoid fever than hitherto. The catarrhal form of cholangitis, such as occurred in our case, has received but little mention. Curschmann,<sup>7</sup> writing on typhoid fever, says that the microscopical examination of the liver in typhoid fever shows more or less change in every case, depending upon the severity of the infection. The liver-cells first show cloudy swelling, and later on granular degeneration and fatty change. Eventually they may break down entirely. The gall-bladder may be the seat of ulcerative or a diphtheric process on its mucous surface. Secondly, the larger bile-ducts may be involved with secondary changes in the liver, leading to abscess. According to the researches of Chiari<sup>8</sup> and Birsch-Hirschfeld,<sup>9</sup> the typhoid bacilli are almost constantly present in the gall-bladder in cases of typhoid fever. Talma<sup>10</sup> has shown in an experimental way that by injecting typhoid bacilli into the gall-bladder a general though mild angiocholitis developed, preceded by a cholecystitis. A careful review of the literature shows few cases of this variety of catarrhal cholangitis as a complication of typhoid fever. Cases of suppurative cholangitis secondary to cholecystitis have been more frequently reported.

An adenoma was also discovered in this same case. This, however, must be regarded as an accidental finding. It bore no relation to the typhoid infection.

In another case a girl of ten years came to autopsy. The liver showed a condition of acute hematogenous hepatitis. The central vein, the capillaries and the interlobular vessels were congested. In the center of the lobule the liver-cells showed fatty degeneration. Small cell-infiltration occurred into the interlobular connective tissue, and also between liver-cells. Small areas of

focal necrosis were observed. There was an increase of interlobular connective tissue with formation of new bile-ducts.

**Pancreas.**—In the case above mentioned, the histological examination of the pancreas showed an acute interstitial pancreatitis. There was congestion of the vessels and small cell-infiltration in the interlobular and intra-acinous connective tissue.

**Spleen.**—The spleen was palpable in 84 cases. Not infrequently the splenic enlargement was observed during the first week of the illness. Tenderness upon palpation of the spleen was seldom observed. In several cases where it had been excessively enlarged the involution of the organ was gradual, and not infrequently the diminution in size was not complete until after the entire cessation of the fever. We learned, however, that the continued persistence of an enlarged spleen was to be looked upon as probable evidence that a relapse would occur.

**Lungs.**—Bronchitis is very often observed during the first week of the disease. It occurs in most of the severe cases, and may occur in those of mild type. It was noted 40 times in our cases. Bronchopneumonia occurred five times, and lobar pneumonia twice.

**Heart.**—Endocardial systolic murmurs occurred in 13 cases. These were for the most part accidental murmurs, as shown by the fact that they disappeared during convalescence. In five cases a diagnosis of mitral regurgitation was made with compensated heart. These probably antedated the occurrence of the typhoid. In one case the heart was markedly irregular, with somewhat rapid pulse, and this condition continued for nearly two weeks. In this case an acute myocarditis was suspected. The patient recovered.

**Skin.**—The roseola was seen during the first few days. It was not uncommon to find it developed on the third or fourth day after what appeared to be the actual onset of the disease. It was noticed gradually to disappear as convalescence approached, and nearly always reappeared if relapse occurred. Our records show that roseola occurred 53 times on the abdomen. In one case it lasted undiminished for 25 days; in 16 cases the rash occurred over the abdomen and thorax; on buttocks and abdomen in two cases; in iliac region in one case; on axilla and abdomen in one case; on flexor surface of arms in one case; over chest, abdomen and buttocks in one case. The rash, with perhaps one exception, appeared in crops during the course of the disease, so that a number of new spots could be seen every few days, the old ones disappearing in the meantime. In one case the roseola became the seat of purpuric spots.

Late in the febrile period and during convalescence sudamina were observed in four cases. Furunculosis occurred in 12 cases. In two cases general furunculosis occurred. In eight cases abscesses of large size were found under the integument in various parts of the body. Onychia was observed in one case.



**Erythema.**—A diffuse erythema is not uncommon in any febrile affection. An erythema occurring early in the disease may confuse the diagnosis with scarlet fever, particularly if a pharyngitis be present. Erythema occurred eight times. In one case it was diffused over the entire body; in one it was localized; in one it was transitory, and in two it was confined to the face.

**Urticaria** occurred in one of our cases early in the second week. Bed sore and multiple gangrene occurred each in one case.

**Desquamation.**—This was observed in 10 cases. It occurs during the convalescence stage, and consists of exfoliation of fine scales. The exfoliation is not as extensive as in scarlatina, and more resembles the desquamation of measles.

**Special Sense Organs.**—Involvement of the middle ear in typhoid fever of children is comparatively frequent. Otitis media occurred five times; once it was bilateral; four times it occurred only in one ear. Severe conjunctivitis was observed twice. The pupils were dilated in a very large number of cases, particularly during the height of the disease.

**Urine.**—The test for the diazo reaction was made in nearly every one of our cases. It was noted to be absent nine times. Its value in this disease depends upon the fact that it occurs in a large proportion of the cases at some time during the disease. The reaction is most pronounced after or during the second week of the disease. The reaction occurs in acute miliary tuberculosis, chronic tuberculosis, measles, scarlatina, malarial fever, pneumonia and other diseases, and depends for its occurrence upon the fact that fermentation and decomposition are going on in the intestinal tract, and that the products thus manufactured are being absorbed, in due time to be eliminated by the kidneys. The urinalysis showed the specific gravity in more than two-thirds of the cases to be 1.018 or less. The presence of albumin was noted in eight cases; hyaline and granular casts in 13 cases.

The bacteriological examination of the urine in 15 of our cases was carried on by Dr. H. E. Davies. His report is summarized as follows:

R. C. No typhoid germs found, but bacillus coli on 31st, 40th and 44th days of disease.—M. F. Typhoid germs found on 34th, 42d and 46th days, with albumin and casts.—R. L. Typhoid germs found on 20th, 28th, 37th, 44th and 50th days, with albumin.—F. I. No typhoid germs found, but staphylococcus pyogenes aureus on 21st, 30th, 37th, 53d days, with albumin.—F. K. Staphylococcus pyogenes aureus found on 23d, 31st, 40th and 48th days. No albumin.—R. H. No typhoid germs, but bacillus coli, or a variety of typhoid germ, found on 40th day.—I. L. Typhoid germs found on 40th, 44th and 50th days, with albumin and staphylococcus pyogenes aureus.—P. G. No typhoid germs, but micrococcus ureæ on 14th, 21st and 28th days.—B. F. Typhoid germs found on 22d, 30th, 34th and 47th days, with staphylococcus pyogenes albus and albumin.—H. M. No typhoid germs, except pos-

sibly a variety on the 27th day; no albumin.—S. S. No typhoid germs, but micrococcus ureæ on the 14th, 22nd and 30th days; no albumin.—T. W. Typhoid germs found on 20th, 28th and 35th days, with albumin and pus.—A. M. No typhoid germs, but bacillus coli on 16th, 23d, 31st and 38th days; no albumin.—M. F. No typhoid, but bacillus coli on 12th, 20th, 28th, 35th and 44th days; no albumin.

**Summary.** (1) Out of 90 specimens of urine, representing 15 cases of typhoid fever, 17 specimens, representing five cases, showed the presence of the typical typhoid bacillus.

(2) In 18 specimens, varieties of the bacillus coli and of the typhoid germs were found.

(3) In the greater number of cases the typhoid organisms were first found from the end of the third week to the middle of the fourth week of the disease. They may, however, make their appearance as early as the end of the second week, or as late as the fortieth or forty-fifth day.

(4) The typhoid bacillus, when accompanied by other species, especially the staphylococcus pyogenes aureus, may occur in such small numbers as easily to escape notice.

(5) As pointed out by Horton-Smith and Petrusky,<sup>12</sup> the typhoid bacillus may be found in the urine in such large numbers as to render the urine turbid.

(6) The largest number of typhoid bacilli in the urine is more likely to be found just after the height of the fever, or at the beginning of the defervescence, from which time they usually decrease in numbers as long as the examinations continue.

(7) In the cases examined by me, where the bacillus of typhoid was found, albumin was always present, frequently in large amount.

(8) In the cases that contained the typical typhoid bacillus pus was almost invariably demonstrable, even though in many cases no pus microbes were present. This would seem to lend additional support to the theory that the typhoid bacillus may itself, under certain conditions, be a pus-producer.

(9) The results here presented, as well as those of other investigators, demand that a systematic bacteriological examination and centrifugalization of all urines from typhoid cases should be made.

(10) When the typhoid bacillus is detected by this means some measures of prophylaxis should be taken against infection. From the first appearance of the typhoid bacillus until it disappears rigid disinfection of the urine should be practised. The ideal prophylaxis would be attained by preventing the development of the typhoid germs in the urine. One means of accomplishing this result would be the administration to the patient of small doses of urotropin, as first recommended in these cases by Richardson.

**Blood.**—Widal reaction was made in every case, most frequently in our laboratory. The dilution was made in the proportion of 1 to 20; later the technic was changed so that the dilution

was 1 to 40. The result was considered positive if at the end of 30 minutes agglutination was complete and motion arrested. The Widal was reported positive in all but two cases. It is difficult to state on what day of the disease the Widal was found to be present. Many of the patients were ill a number of days before admission; in several cases, however, it is safe to say that the Widal was positive on the second and third days of the disease. It was found as late as the fortieth day.

The blood in typhoid presents characteristic features. The hemoglobin gradually diminishes during the course of the disease. The number of red corpuscles also decreases in a gradual manner during the febrile period. At first the red cells are unchanged in form; later they may be seen to vary in size. If the anemia becomes severe poikilocytosis may occur. More rarely, nucleated reds, normoblasts and megaloblasts may be seen. The leucocytes at the onset of the disease are neither increased nor diminished. At the end of the first week the number begins to decrease, so that during the third week leucopenia exists. If complications such as pneumonia, perforation and peritonitis set in, leucocytosis occurs. The blood-findings in one case are as follows:

L. M., admitted to hospital September 11; discharged November 9, 1901.

Date.	Leucocytes.	Reds.	Hemoglobin.
Sept. 12.....	9,000	4,810,000	73 per cent.
" 29 .....	6,300	4,680,000	70 " "
Oct. 14.....	6,750	4,520,000	63 " "
" 28.....	6,600	4,160,000	68 " "

In seven of our cases other members of the family were ill with typhoid at the same time. In 10 cases the report was made that typhoid was prevalent in the neighborhood.

Out of the 90 cases treated two died. These have already been referred to. One girl eleven years old died as the result of a severe attack of the disease, with changes in the liver and pancreas and extensive ulceration of the bowel. The other child, aged twenty-one months, suffered from multiple gangrene and catarrhal cholangitis.

Treatment.—The treatment which we employed was the same that is everywhere in vogue. It may be divided as follows:

- (1) Hygienic.
- (2) Dietetic.
- (3) Hydrotherapeutic.
- (4) Expectant and symptomatic.

A large proportion of the cases ran the entire course of the disease without receiving any drugs. Patients were kept in bed and as quiet as possible, although they were encouraged to change their position in bed frequently. This enforced rest in bed could not be strictly adhered to in young children. It was necessary to pick them up on

account of restlessness, or to change their napkins, and for their baths. The mouths were kept scrupulously clean by washing with boric acid solution. The usual precautions were practised concerning the prevention of bed-sores.

Only a few visitors were allowed in the ward at a time, and if a number of patients were ill visiting was abolished. During the febrile period the patients were kept on a liquid diet, consisting almost exclusively of milk, except in those rare cases where milk could not be borne. After the temperature had fallen to normal, strained gruels, broths and fruit juices were permitted. The patients were all encouraged to drink large quantities of water. No solid food was allowed until the tenth day of normal temperature.

The treatment of the fever was carried on on the hydrotherapeutic plan. Our experience soon taught us that children badly bore cool baths; that is to say, baths in which the water was reduced to a temperature as low as 70° or 75° F. The children who were thus bathed lived in constant terror of the succeeding bath. They were nervous and unhappy. In consequence of this they were restless, the pulse and respirations were accelerated. Not only this, but those patients who were given cool baths frequently reacted badly. They were literally forced into the water and retained there against their will; not a few of them chilled; many of them were somewhat cyanotic and excited after being replaced in bed. As is the custom generally, our little patients were bathed for a temperature of 103° F. They were carried from the ward into the adjoining bath-room, and were placed in the tub with water at a temperature of from 88 to 90° F.

The bath was so arranged that a hammock was suspended over the tub, and when the child was introduced into the bath it reclined comfortably on the hammock. We found, as will be shown by the accompanying charts, that in nearly every case if the child were allowed to remain in the tub for five minutes in water at 90° F. the bodily temperature was reduced two degrees, and the pulse and respirations fell a corresponding number of points. The children were continually rubbed while they were in the baths; they experienced no chilliness, no discomfort; they enjoyed them and looked forward to them. In those cases where the fall of temperature was not satisfactory, or where the fever was unusually high, it was found that by leaving the children in the bath for 10 or 12 minutes a greater reduction of temperature could be obtained. This is also illustrated by an accompanying chart. It was noted as a point of interest that the bath-water was usually raised two degrees, that is to say, water that was 90° F. when a child was placed in it was raised to 92° F. before the bath was finished. No antipyretic drugs were employed to reduce the temperature in any case. In those cases showing nervousness or restlessness, an ice-bag applied to the head sometimes gave relief. At times a small dose of Dover's powder or sodium bromide was given for restlessness and sleeplessness.



Constipation was treated by enemata, and cases of severe diarrhea were given small doses of deodorized tincture of opium. In the prolonged cases which showed the exhausting effects of the disease, where the pulse was rapid and weak, whiskey or brandy was employed, and moderate doses of strychnine were given. A child ten years of age was given 1-100 of a grain three or four times a day. A child three years of age was given 1-200 of a grain of strychnine three or four times a day. Intestinal antiseptics were rarely employed.

It is unnecessary to go into further detail concerning the various complications and conditions which arose and required special attention. Such complications and conditions were treated as they arose, on a rational plan. At the close of the febrile period patients were frequently given a tonic in a routine way, the favorite being the elixir of iron, quinine and strychnine.

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#### PARASITIC AMEBÆ.

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THE occurrence of amebæ in certain malignant tumors, and especially in the squamous cell-carcinomas has received the attention of pathologists for many years.

In this disease as in countless others the simple occurrence of certain animal and vegetable parasites has been interpreted in the relation of cause and effect. The observation of such forms has led to countless errors from the fact that investigators, having seen these parasites with considerable regularity, and with a considerable breadth of experience, announce boldly to the world that they have discovered the cause of certain pathological lesions. It is not always possible to carry out the postulates of Koch for the reason that many human diseases cannot be transmitted to the lower animals; and again, suitable culture media cannot always be discovered that will furnish the necessary prerequisites for the life of the organism.

In the last two or three years we have all been interested in the announcements of Eisen, Plimmer, Gaylord, Schueller and others as to the occurrence of certain probably parasitic bodies found with very considerable regularity not only in epiblastic and hypoblastic, but also in mesoblastic tumors. I think all have as yet failed to cultivate the ameba and to produce similar

growths in lower animals with the pure culture. While the occurrence of the ameba in malignant tumors is an interesting coincidence, and while there are many reasons for suspecting an infectious agent in certain cases, we must as yet be satisfied to accept the possibly rather unsatisfactory theory that the cause lies in some unexplained

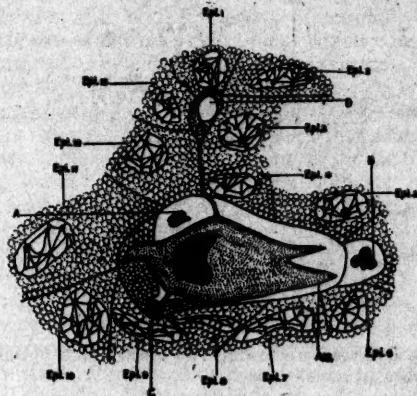


Fig. 1.—Section showing ameba (Am.) surrounded by epithelial cells (Epi.)

stimulus causing epithelial tissue to proliferate and infiltrate in an unnatural manner mesoblastic as well as epiblastic and hypoblastic tissue.

While the parasitic theory satisfactorily explains many of the primary growths, it fails to show why epithelial tissue proliferates in a locality where it has no normal habitation, as in meta-



Fig. 2.—Section showing two amebæ with epithelial cells more or less destroyed.

static growths occurring in mesoblastic tissue. Epithelial tissue can be produced only by proliferation of preexisting tissue of the same kind, and no amount of irritation can produce epithelial tissue from connective tissue. It is a strange coincidence that the amebæ often found in carcinoma, especially of the squamous cell variety,

morphologically resemble those found in sarcoma.

While I have seen amebæ with very complicated pseudopodia in carcinoma, some of which I have reproduced in the accompanying illustra-

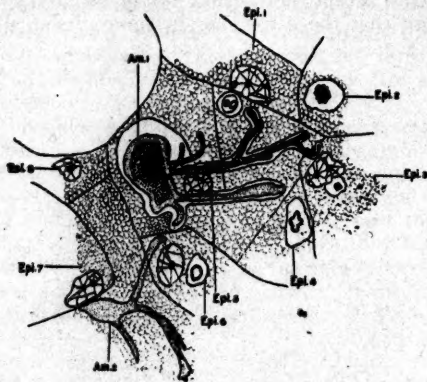


Fig. 3.—Section showing two amebæ each possessing complicated pseudopodia.

tions, I have never seen such perfect ones in any sarcomas.

The amebæ that I have seen have almost always been situated in a vacuole, the smaller ameba in Fig. 3 being an exception to the others. All show a nuclear structure, or at least a darkly

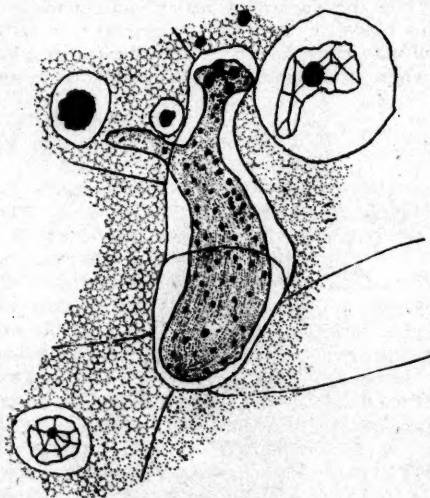


Fig. 4.—Section showing a single ameba having about 75 large granules in its body.

staining endosarc, that is sometimes not sharply differentiated from the ectosarc.

The amebæ with the most complicated pseudopodia I have yet seen are represented in Figs. 1 and 3. In both of these the organism which are each at least 50 microns in diameter, possesses slender pseudopodia that are at least 150 microns long, passing out through one or two epithelial cells. In Fig. 1 a distinct vacuole ex-

ists in the upper part of the pseudopodium. Fig. 4, while it does not have as long pseudopodia as the others, possesses a peculiar internal structure. The tissue is stained with eosin and thionin. There are about 75 very large blue granules, which are markedly differentiated on the red background. The granules are from two to three microns in diameter. It also possesses four spots or granules at the upper part of the right-hand pseudopodium that are distinctly larger than the rest, being probably four to five microns.

The pseudopodia in Fig. 3 are the longest and most branched of all, being at least 150 microns in length, and passing through several cells. What the relation of these low animal parasites may be to their host is problematical. They are frequently seen in epithelial cell-nests, a circumstance which appears to show an effort of nature to proliferate the epithelial tissue, surround the organism, cornify, and effect a digestion or destruction of the invading foe.

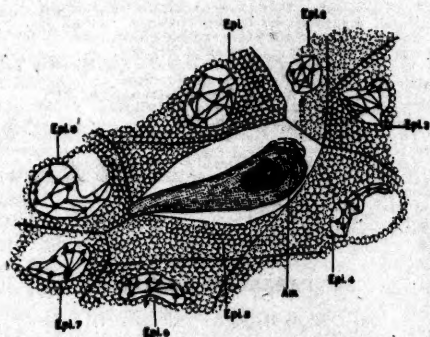


Fig. 5.—Section showing a single ameba.

The ameba multiplies by sporulation, as is plainly evident in many of my sections. The process resembles the appearance of sporulation seen in the plasmodium of malaria. The sporocyst contains 20 to 30 minute refractile bodies each two to three microns in diameter. The sporocyst ruptures, and the small spores are seen lying free in the tissue. The sporocyst frequently measures 30 to 40 microns in diameter.

Figs. 1, 2, 4, 5 were taken from a squamous cell-carcinoma of the rectal wall, and it might therefore be reasonably supposed that the amebæ may have wandered in from the intestine; but Fig. 3 was derived from a squamous cell-carcinoma of the face, where such contamination could not be possible.

#### Pruritus.—

B	Acidi Carbolici .....	4.0-12.0	(3i-iii)
	Glycerini .....	8.0	(3ij)
	Alcohol .....	30.0	(3i)
	Aque q.s. ad.....	500	(oj)

M. Apply as a lotion, or, and more especially in the local varieties of pruritus, use an ointment or oil of petrolatum or rose-water ointment or liquid petrolatum containing 1 to 4 per cent. of carbolic acid.

—STELWAGON.



## VERTIGO IN NEUROLOGICAL DIAGNOSIS.\*

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COMPLYING with the request of the President of the Academy, my remarks will be essentially practical, and will deal with vertigo only in its relations to diseases of the nervous system. They will contain, therefore, no reference to vertigo due to diseases of the ear proper, or to such peripheral causes as eye, nose, throat, uterine, digestive and similar disturbances.

Vertigo is of two varieties, subjective and objective. In the subjective the patient gives no external manifestations of being giddy. But he says that he feels so. The complaint is generally that he feels as though he were spinning around. In the objective variety, external evidences of subjective giddiness are present in that the patient staggers or falls. In this form the subjective sensation of the patient is that of external objects moving.

In spinal cord diseases and in affections of the peripheral nerves vertigo's place is unimportant. Its neurological interest is associated with the neuroses and with diseases of the brain. Before passing to these two great classes, however, a word must be said concerning its occurrence in certain toxic conditions which affect the nervous system. The effects of drugs, of alcohol, coffee and tobacco in causing dizziness are too familiar to require comment. This class of external poisons is only mentioned for the purpose of calling attention to one drug in particular, which is prescribed with great frequency. I refer to the iodide of potash. The *vade mecum* of the neurologist, and usually given in excessive doses in suspected cases of nervous syphilis, either for diagnosis or therapeutics, this drug is sometimes responsible for excessive vertigo. In its pronounced action in lowering blood pressure there is excellent explanation of this effect, theoretically. And clinically it has frequently been forced upon my attention that patients with suspected syphilitic lesions become worse under the iodide treatment, with the symptom of vertigo well in the foreground. This has occurred especially in patients in whom the diagnosis of syphilis was doubtful; or in those in whom, with undoubted syphilis, the disease had passed the stage when specific medication helps. Vertigo thus occasioned is often intense, sometimes causing the patients to stagger, and is accentuated by all changes of position. Of the various internal poisons or auto-intoxications responsible for vertigo, few belong strictly to the neurologist, though he is often consulted when this symptom results from auto-intoxication. The one disease strictly nervous, in that neurotic predisposition is necessary for its development, and which seems to be of autotoxic origin, is migraine. In migraine dizziness is often one of the symptoms of the full-fledged attack. It may also be, though not fre-

quently, one of the equivalents in which this multiform disease presents itself.

Turning now to the main subject of discussion, I will speak first of vertigo as it occurs in neurasthenia and hysteria. In these disorders vertigo is chiefly subjective. It is complained of regularly and constantly, yet it is difficult to demonstrate. The behavior of the patients in regard to it is somewhat different in the two affections. Neurasthenics complain of dizziness, which comes on in attacks, or which is more or less constant. This is particularly the case in the depressed forms of neurasthenia and in hypochondriasis. The patients describe a feeling of uncertainty and insecurity, and a sensation of falling or a fear of falling, rather than that external objects move. Like all neurasthenic symptoms, it is intensified by excitement, fatigue and observation. The patients, sometimes, when talking about it, put out their hands as though to keep themselves from falling. Yet careful examination shows that they can walk a chalk line unflatteringly, and that there is no increase in the normal swaying when they stand with the feet closed together and the eyes closed. The pathological conditions embraced in the term neurasthenia are so numerous that sweeping generalizations on any one point cannot be made. The above statements regarding vertigo apply to most cases. It is most frequently subjective, is a symptom of fatigue, and is intensified by idea. But some neurasthenics present genuine objective vertigo. These should invite the physician's attention to closer investigation; for it may well be that the cause of the dizziness is to be found in fermentative digestive disturbances; or, in patients who have been for a long time ill, that it indicates degenerative changes in the cerebral blood-vessels of a character to more or less permanently impair the intracranial circulation.

In hysteria, vertigo is much less frequently complained of than in neurasthenia. In fact, in true hysteria the patient acts rather than complains. There are, however, a variety of hysterical disturbances of equilibrium and motion which might be mistaken for objective vertigo, especially in view of the readiness of assent characteristic of hysteria. The patient would readily, if questioned, agree that peculiar cerebral sensations were the cause of the objective vertigo. Thus in hysterical hemiplegia the tendency to stumble, to stagger, or even to fall, toward the paralyzed side, is often pronounced. In some patients of this class the mode of progression is perplexingly similar to that of cerebellar disease.

In a case of traumatic hysteria seen several years ago, I was quite unable to make the patient stand steadily with the feet together. He would persistently sway toward the right (the paralyzed side), until finally he was forced to put out the right foot to save himself from falling. In walking, also, he made leeway toward the right. The morbid ideas in this patient were so fixed that his peculiarities of locomotion were practically the same whether he thought himself observed or not.

\*Read by invitation before the New York Academy of Medicine, May 15, 1902.

In some cases of convulsive hysteria the attack is characterized by vertigo. This is the pseudo or hysterical Ménière's disease. Neither in hysteria nor in neurasthenia is it possible to establish the nature of vertigo by the one symptom. In all neuroses diagnosis is by exclusion. So with vertigo. Other causes of it must be eliminated before it can be postulated as purely functional and neurotic in origin. That it can exist in these affections almost purely as idea there is little reason to doubt, and this for the following reasons: Giddiness is a sensation from which everyone suffers, at some time or another, as the result of sudden changes in position, of slight errors in diet, or of other trivial causes. Also, no condition is more easily magnified, intensified, and prolonged by the subject focussing his attention upon it. Since in neurasthenia and hysteria the main mental characteristic is introspection and self-analysis, it is not surprising that in these disorders we find vertigo a prominent symptom without traces of permanent or adequate underlying physical cause.

In sharp contrast to the vertigo which occurs in the above-mentioned diseases, is that which results from organic disease of the brain. According to our present knowledge, vertigo from organic brain diseases is due to interference with the centers of equilibrium situated in the medulla and cerebellum. These centers can be effectively interfered with in several ways. They may be directly invaded by sclerosis, by tumor, hemorrhage, thrombosis, abscess and trauma, or by indirect means, through changes in the blood-pressure or general brain-pressure.

A few words as to the centers of equilibrium may be said here. The ganglion of Scarpa, in the internal ear, contains ganglion cells which are bipolar. Of the axones of these cells, one set is distributed to the semicircular canals, the other set, as the vestibular nerve, continues outward to nuclei in the medulla. There it is put in connection with the axone terminals of other neurones by means of which it is brought into relation with the pons, cerebellum and probably with the cerebrum. The mechanism thus composed, probably through some influence on the tone of the muscles, is the active agent in equilibrium. Since the cerebellum is clearly an evagination or appendage of the segmental nervous system, and since, with the acoustic system, it is the one active agent concerned in equilibrium, Loeb suggests that the cerebellum is a part of the acoustic segment. Certain it is that experiments on animals, and human experiments, through focal lesions, indicate the semicircular canals, the vestibular nerve, and the connections of the vestibular nerve in the pons, medulla and cerebellum, as the seats of disease when equilibrium is disturbed. It is a very attractive theory which collects all these units into one neural segment. Unilateral disturbances of equilibrium, arising from injuries to these parts, shows itself by a tendency to fall to one side, to stagger, to make muscular movements which are incoordinate and

more forcible than normal. There also occur certain forced movements, such as turning the body or the eyes to one side. In human beings these motor symptoms are accompanied by the subjective sensation of extreme giddiness.

The symptoms of incoordination and those of loss of balancing power are practically the same, wherever the lesion in the mechanism concerned in equilibrium be situated. These symptoms, as far as the internal ear is responsible for them, have been considered by preceding speakers. The medulla, pons and cerebellum, and possibly the cerebrum, therefore, are the three nervous structures in which focal invasion may give rise to subjective and objective vertigo. In the pons and medulla such invasion is usually tumor. Suddenly acting forces, such as hemorrhage or trauma, are generally fatal. In the cerebellum, abscess outranks tumor in point of frequency. Cerebellar hemorrhage may also cause loss of equilibrium, but trauma with such a result is rare. In the pons and medulla the symptoms of vertigo are usually outranked in importance by local palsies. Consequently, it is in the cerebellum that vertigo, as a focal symptom of nervous disease, has its great prominence.

Cerebellar ataxia and the great dizziness which accompanies it, is essentially static and locomotor. In the horizontal position the patient is usually free from it. It is not made worse by closure of the eyes. In a certain proportion of cases there is a tendency to stagger to one side. Theoretically the staggering is toward the side of the lesion. Practically, this is not always the case. The great difficulty in the diagnosis of these cases is due to the pressure symptoms at a distance. The diagnosis of disease of the cerebellum (with the exception of disease of the lateral lobes, which does not necessarily give ataxic symptoms) is in itself not difficult. But that the diagnosis of the side affected is too often impossible, is shown by the melancholy chapter of the surgery of cerebellar tumors. In abscess, the side of original infection, if this be unilateral, gives the clue to the side of the cerebellar disease. But in tumor the only symptom at all reliable for diagnosis as to the side involved is compression of the acoustic nerve. One-sided nerve deafness, in a case of cerebellar tumor, is almost positive evidence that the tumor is on the side of the deafness. The other symptoms cannot be relied upon. Palsies of the fifth, sixth and seventh nerves may be on the same side or on the opposite side. Hemiplegia may be on the same side or crossed. It is true that certain combinations of symptoms lead one to suspect one side more than the other. But if unilateral nerve deafness is absent, it is impossible to be certain as to the correctness of this diagnosis.

As has been said, the main centers of equilibrium may have representations in the cortex. Hitzig believes that the dizzy attacks so characteristic of cortical tumors in the central convolutions are due to direct interference with these connections.



Under the head of vertigo caused by changes in blood-pressure or in brain-pressure, can be grouped most of the cases of vertigo due to central nervous disease. Two chronic brain diseases stand out prominently in this connection, viz., epilepsy and general paresis. In the grand mal seizures of epilepsy vertigo is rarely complained of as an aura, and, as the loss of consciousness is profound, it can form no part of the attack itself. In petit mal, on the other hand, it is the most frequent prodrome. Occurring in this way it is of brief duration and not of great severity. Its diagnosis depends upon its periodicity, upon the manifestations which succeed it, and upon the association of other conditions.

General paresis rarely runs its course without attacks. In general these attacks are apoplectic or epileptic in character. In some cases, however, they take on the characteristics of petit mal, consisting of dizziness, or dizziness preceding other cerebral manifestations. The subject is mentioned here because the disease is becoming such an important factor in metropolitan life, and because it so frequently fails of general recognition. Its physical signs are, however, unmistakable. Few diseases permit more certain diagnosis; and the diagnosis is strongly reenforced if the history of attacks is obtained.

Cerebral endarteritis is the most fertile cause of vertigo due to brain disease. It sometimes occurs as an independent condition. It is especially prominent in the aged. It is often the chief clinical expression of general arteriosclerosis. Its relations to nephritis and syphilis need no comment. In cerebral endarteritis, dizzy attacks, plus the objective signs in the vascular system, may be the only symptoms, or cerebral endarteritis may have a distinct neurological symptomatology. The symptoms then are mental and physical. The mental symptoms consist of slight failure of memory, faulty attention, and a general deterioration in intellectual power. The patients become more irascible, irritable or emotional than formerly. Physically, there is apt to be anemia and some loss of weight. The patients complain of being more or less constantly giddy, a feeling which is intensified by sudden changes in position, by indiscretions in diet, and by changes in atmospheric pressure. This subjective sensation can be recognized as an objective symptom by observing the patient's station and gait. Without evidences of definite tract degenerations or focal brain disease, the patients present the Romberg symptom, and are extremely unsteady in gait. In general characteristics this latter resembles that of ataxic paraplegia. The dizzy attacks which accompany such conditions may be frequent and severe. Such attacks may persist for months or longer, or they may disappear entirely, without serious consequences. But sooner or later cerebral endarteritis is apt to be punctuated by an apoplectic stroke. As a symptom of apoplexy, vertigo is extremely prominent. Although absent in fulminating cases, attacks of dizziness are very common as precursors

of strokes. They may occur daily for weeks before the final attack. They may be momentary, or last several minutes or longer. The patient's subjective sensations are most distressing. Objectively he clutches at surrounding objects or falls. Vomiting, or other indications of brain storms, may be present. The less severe and the less rapid the development of the stroke, the greater is the prominence of dizziness as a symptom. Thus it is quoted as more frequent in thrombosis than in hemorrhage, and less frequent in embolism than in either. Apoplexy due to syphilitic disease of the cerebral arteries—by far the most frequent form of brain syphilis—is characterized by its incompleteness. Consciousness is only occasionally obliterated, and many of the other apoplectic symptoms are wanting. In the cerebral manifestations of syphilis, therefore, vertigo holds a place of the highest diagnostic importance. As a herald of impending mischief, if promptly recognized and promptly acted upon the threatened stroke may in many cases be entirely avoided.

The other conditions due to disturbances in brain-pressure or blood-pressure are cerebral tumors and abscesses (non-cortical, according to Hitzig) and traumata. In tumors the dizziness is usually not extreme, being complained of chiefly upon changes in the position of the body. In traumatic lesions dizziness is generally lost in other symptoms at first. But nearly all patients suffering from *trauma capitis* complain of dizziness or an increased susceptibility to it for a long time after the accident.

#### OCULAR VERTIGO.

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By far the commonest cause of ocular vertigo is the diplopia following a paralysis or paresis of some nerve supplying the ocular muscles. As is well understood, when such a muscular anomaly exists the patient is annoyed by diplopia; that is, he sees two images, and the confusion arising from trying to distinguish between these two images is the immediate cause of the vertigo. It must not be forgotten, however, that diplopia is frequently met with unassociated with vertigo. The latter is an early symptom, and often disappears after the diplopia has existed some weeks or months, the patient being less and less disturbed as the weeks go by. Ordinarily the diagnosis of some muscular anomaly of the eye is not difficult. The patient tells us he sees double, and he often holds the head in some unnatural position—as, turned to the extreme right or left, or bent forward—having discovered that in this position the double images are fused into one and that the diplopia disappears.

As to the diagnosis, only two points will be referred to here. The first is that the less conspicuous the ocular anomaly is to the observer, the more apt is the patient to suffer from vertigo.

If the patient has a marked squint the two images will be so far apart that they will produce comparatively little disturbance. If, however, the deviation of the ocular axes is so slight as to be scarcely discoverable by the observer the two images will appear to the patient quite close together, and the resulting confusion will be much greater.

The second point to be remembered is that the failure of the vertigo to disappear when one eye is closed does not necessarily exclude the possibility of the existence of some muscular anomaly of the eye. If only the good eye is closed the patient will sometimes project falsely in the direction of the affected muscle, which will result in an apparent swimming of objects when he moves about or turns the head in different directions. The following is a safe rule: If closing one eye, the right, for example, does not cause a disappearance of the vertigo, then have the patient close the other eye; that is the left only. If we have to do with a paralysis or paresis of an ocular nerve the vertigo will then disappear at once. The question as to which muscle is affected is often very difficult to decide, but is of interest chiefly to the ophthalmologist. Only in exceptional cases is the vertigo from this cause severe, though I have seen a patient so disturbed as to be nauseated. As to the etiology of ocular palsies, syphilis, diphtheria and diseases of the brain and cord are the commonest causes, and the treatment would of course be that appropriate to the underlying cause. The patient should wear an exclusion-glass. While worn, this will relieve him of his symptoms. No operative treatment is indicated until other therapeutic measures have been carefully tried, and at this stage the vertigo has usually long since disappeared.

If we have excluded any paralytic muscular anomaly, I must confess that my expectations of finding in the case any ocular cause for the vertigo are very much lessened; for in my experience at least, real ocular vertigo, the cause of which lies in some corrigible anomaly of the eyes, refractive or muscular, is very rarely met with. When such a patient is referred to me by some colleague, usually everything else about the individual has been investigated with negative result, and as a last resort he is sent to the oculist to see if he can find any cause for the distressing symptom. If there is no ocular paralysis, I consider it to be very improbable, though still barely possible, that the eyes may be the cause of the vertigo.

Such patients should have a most rigid investigation made of their refraction, under a mydriatic, if possible, and any error however slight should be corrected. In many individuals, especially if neurasthenic, surprising and gratifying results often follow the correction of very slight refractive errors, particularly of hyperopia, with or without astigmatism. Under correction the muscles are next carefully investigated, and note made of any existing imbalance. I then give the patient, to be used for a while, the proper correction for his refractive error, ignoring for the

time any muscular anomaly. If after careful trial this is productive of no relief, then any existing muscular imbalance is corrected as far as possible by prismatic glasses, combined if necessary with the proper refractive correction.

*A priori* imbalance of the vertical muscles is considered a more common cause of such a symptom as vertigo than a similar condition of the lateral muscles. If relief follows one is warranted in concluding that the cause was ocular, while a negative result usually warrants one in excluding the eyes as a cause. The writer can conceive of a condition of muscular imbalance where a tenotomy or some operation on the muscles might be necessary in order to relieve a patient of vertigo. As a matter of fact, however, I have never met with any such case where operative interference with the muscles seemed to be indicated for the relief of this symptom. As my experience grows larger I become more and more convinced that the influence of insufficiencies of the ocular muscles in the production of various disturbances has been vastly overestimated, and I share the opinion of many conservative men that a good deal of injudicious snipping of the ocular muscles has been practised.

In conclusion I would say that I have met with not a few cases of vertigo associated with ocular palsy, but the number in which a muscular or refractive anomaly of the eye was the cause has been very small.

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#### TO WHAT EXTENT, IF AT ALL, SHOULD PHYSICIANS DISPENSE?\*

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THE question whether the physician should dispense his own medicines is one upon which the individual doctor is usually ready to express emphatic opinions, but which has not yet reached a harmonious solution. It can hardly be said that the physician who dispenses his own medicines is an innovator. The physician of the country districts has by necessity always been compelled to be provided with a full equipment of drugs. The early fathers of medicine compounded their own prescriptions. It can rather be said that a complete dependence on the druggist is the later development.

The druggist very early developed as a convenience to the busy practitioner. Engrossed in the supervision of a large practice, the physician willingly relegated to the druggist the more mechanical part of the art of healing. As a result of the specialization of the compounding art, the druggist attained a degree of superior skill, and thereby made himself the more necessary to the physician. Further, there seems no likelihood that the doctor will ever be independent of the druggist. The preparations requiring time, patience and skill for their production must remain

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in the druggist's special province. I might venture to assert that if the doctor would consult his own pleasure merely, he would willingly relegate to the druggist the whole subject of compounding and dispensing.

Prior to the advent of the tablet triturate and the compressed tablet, the dispensing by the physician of his own medicines in the more thickly populated districts never reached any magnitude. The tablet supplies a medicine that is cheap, of uniform strength, acceptable to most patients, and of reasonable quickness of absorption. The profession very soon recognized that in the new preparation it possessed a means of being much more independent, and at the same time not subjecting itself to any great inconvenience in its dispensing. That the introduction of the tablet triturate and the compressed tablet was quite extensively appreciated by the profession was evidenced by the storm of criticism aroused against it, not only by druggists, but by many doctors who looked with disfavor upon the innovation.

I will briefly consider some of the objections that were raised against tablet dispensing. It is hardly necessary to state that the dispensing of tablets is practically the only kind of dispensing that is of interest to us. The old cry that the tablets contained inferior drugs is not heard now as much as formerly. No one need buy his tablets of any save manufacturers of proven integrity, men who possess ample facilities and a desire to conform their drugs to standard strengths, either chemically or, where the particular drug demands it, physiologically. We can certainly expect better drugs on the average from large manufacturers who, have the pick of the drug-market, in many cases purchasing at the original source of supply, and with complete apparatus for drug-testing, than from the retail druggist with more limited facilities.

It is undoubtedly true that some of the tablets placed on the market deteriorate; for instance, tablets containing camphor rapidly lose a considerable part of that ingredient. It is equally true, however, that other made-up preparations containing ingredients that will evaporate, sublime, or undergo physical or chemical changes, are alike objectionable. The only comment necessary here is to say that due discrimination on the part of the physician is essential in meeting these limitations. I have heard druggists criticize the composition of tablets, stating that girls and other representatives of unskilled labor were employed at the mixing machines, and that the preparations were incompletely mixed and therefore did not contain the dosage of the various ingredients claimed. For my part I believe that a tireless, methodical machine, complete in all its mechanical details for doing the work required, gives better results than are secured in the average drug-store where the mixing of preparations is done by ordinary hand-labor.

The girl who tends the machine is not a druggist, but the measure of her skill is sufficient to complement the work of the machine, and we

must remember that the supervisors of the work are selected pharmacists of undoubted ability.

One objection that was more pronounced in the earlier days of tablet manufacture, but which is still of decided moment, is the hardness of the tablet. This may be caused at the time of manufacture from too great pressure, or may result a little later from a setting or other change in the ingredients of the tablets. I have tested tablets in water, and have found in some cases that after 24 hours' immersion the tablet remained practically unchanged. It has seemed to me that this was a defect more common in tablets made by some firms than in others; yet I believe tablets containing certain ingredients placed on the market by all the makers of these products are inadvisable for use in this form. The physician will secure better results in these cases if he prescribes a fresh preparation in some other form.

There are many occasions arising in our daily practice where the immediate administration of medicines is of decided advantage. Many times, because of delay on the part of the patient or the druggist, hours are wasted before the administration of the medicine desired is commenced. He who has in his armamentarium tablets of calomel in fractional doses, aconitine, atropine, etc., can gain much valuable time that might otherwise be lost to the patient.

Another very great advantage in the dispensing of tablets is the surer control which you have over your patients. When the tablets give out the patient must either return to the doctor or remain untreated. We are all aware of the very great tendency of some patients to continue having a certain prescription renewed *ad infinitum*. It is not unusual to find patients preserving copies of prescriptions they consider especially miraculous, and, besides renewing these themselves, proffering copies to friends whose diseases they diagnose as being similar to their own. It is hardly necessary to mention here how frequently this works injury to the patient as well as to the physician.

In former years one heard much more of the unethical aspect of the physician's dispensing than is heard to-day. Now we hear more of the impropriety of the procedure and of its tendency to degrade the profession. It seems to me that when we carefully examine the matter and compare the procedure with the methods of former times, one is hardly justified in contending that dispensing is in anywise improper or degrading of itself. The ideal in medicine has been to preserve it from any flavor of commercialism. Dispensing has been looked upon as a step in the direction of the physician-druggist. A physician owning a drug-store is looked upon with disfavor in our city. He is debarred from membership in the County Medical Society. In other parts of this State, however, such disqualification does not hold. We believe that a drug business is a commercial enterprise, but so also are numerous other enterprises commercial in which physicians are daily investing their surplus money. Theoretically a

physician has as much right to invest in a drug-store as in any kind of business. We make the point that a doctor, equally with any other man, has a perfect right to invest his money in any honorable commercial enterprise. Such a venture must be independent of his practice of medicine. It should be the investment of a man in a business not dependent upon or associated with his practice of medicine. When a doctor's prescriptions are to be filled at his own drug-store only, then a commercial quality is instilled that deserves condemnation. Not in extenuation but in comparison we would state, however, that the physician so wording his prescriptions that they can be filled only at a favored drug-store is equally culpable. Moreover, a drug-store stands in a peculiar relation to all physicians. We believe that theoretically a physician might own a drug-store without hurting his fellow practitioners, but in practice, with fallible human nature such is not often the case. It is not because of its commercialism so much as on account of its unethical possibilities that a drug-store becomes obnoxious. Dispensing is not a commercial enterprise. Even where a physician makes a charge for the medicines he furnishes, the nearest approach to commercialism, the profits are too insignificant to enter into consideration. Dispensing by the physician certainly gives him no opportunity to criticize the prescriptions of a fellow practitioner, which is the chief unethical aspect of the physician-druggist question.

We can see then that dispensing is neither a commercial nor an unethical procedure, and is not comparable to the business of the physician-druggist. The charge that it is so is due to a false conception on the part of many, both of the profession and the laity, due to the customs of the times. We believe it true that a very considerable number of people look with suspicion upon the tablet-dispensing old-school doctor. They have heard physicians and druggists state that tablets are inferior to freshly made preparations, that the doctors are poor imitators of homeopathy, etc., and so place him in a class not much above the quack. The question really resolves itself into one of policy. The physician is wise to examine the sentiment of his patients, and if he finds that the practice is regarded as a cheap attempt to gain favor the sentiment of the community should very naturally influence his decision in the matter.

It is well-nigh impossible to write an article upon this subject without referring to the gentlemen who sail under the banner of "infinitesimals" and "similia similibus curantur." Very much of the prestige gained by the homeopaths has been due to their dispensing confectionery dubbed as medicine. Many of the laity, intelligent or the reverse, ignorant of the basic principles of medicine, take the flavored tablets dispensed to them, and rely on the self-confidence of the physician for the healing virtue. A member of this class will solemnly assure you that he cannot take strong medicine—usually meaning anything that is bitter—yet under tactful management he

will shortly be taking tablets containing strychnine or some other disagreeable drug. A peculiar inconsistency that I have frequently noticed is that these homeopathic disciples are considerable users of the various patent medicines on the market. Observation leads me to conclude that the modern tablet finds favor with the homeopaths, and that they are dispensing in no small degree according to the principles of treatment of the regular school. From a strictly humanitarian standpoint this is a distinct advantage. The advent of the tablet triturate, in addition to providing in itself medicines of easy administration, has spurred the old-school doctor still further to make his doses generally more palatable.

A feature worthy of some consideration is that in some districts the purses of the patients will not permit any great stretching for sickness. Many who would not acknowledge this to be the case are yet undoubtedly influenced to go to the homeopath rather than to the more expensive physician of the regular school. I am aware that many contend that this point is of no weight, but I have been convinced of it too often, both by actual confession and by inference, to doubt its accuracy. This is perfectly compatible with the fact that many persons are so prejudiced against sugar treatment that they will consult the regular physician under any circumstance.

A few words with regard to this question as it appears to the druggist might not be inappropriate. We are quite aware that the druggists generally see no virtue in the humble tablet triturate. I firmly believe that these gentlemen as a class are quite as honorable as the members of any other vocation. Yet it has always appeared to me that this condemnation of tablets is quite akin to the horror of the idol-makers at the temple of Diana of the Ephesians when they believed that St. Paul was about to spoil their trade. They must certainly admit that the evils of counter-prescribing, duplication and reduplication, substitution, etc., are only bringing upon them a merited retribution.

From a philosophical standpoint it must be admitted that if tablet-dispensing proves itself an advantage and an advance it is only another of those steps of progress that hurt the few for the benefit of the many. The druggist will of necessity continue, but he may have to accommodate himself to new conditions.

There is one evil of tablet-dispensing which in a paper like this must not be omitted. The manufacturers of these products have endeavored to supply a complete list of these preparations to meet all the ills that flesh is heir to. An examination of many of these formulæ discloses the fact that for supplying the preparation in tablet form the doses of the various ingredients are manifestly disproportioned to each other. Dispensing of such tablets will not secure the results that can be attained by a carefully written prescription. Again, if a physician dispenses extensively he will frequently meet cases where a formula different in some particulars would be-



ter meet the demands of his judgment. Too much care can not be exercised to prevent the physician from falling into a rut and relying upon the made-up formula at hand.

The points for and against dispensing by the physician have been advanced in such a condensed fashion that a summary is hardly necessary; but the conclusion I have reached in my own judgment is that all physicians should be equipped with a few of the standard tablets for immediate administration in emergency cases; that the more extensive dispensing is purely a matter of policy and to be decided by the individual physician, and finally that while the physician should never permit himself to lose grasp of the complete armamentarium at his disposal, he should be prepared at all times to avail himself of the advantages which the careful prescription will secure.

## MEDICAL PROGRESS.

### MEDICINE.

**Myelopathic Albumosuria.**—Concerning the symptoms of this condition, the following remarks are made by T. R. BRADSHAW (Lancet, Oct. 4, 1902). The onset of the disease is insidious. The earliest symptoms observed may be either those associated with the state of the bones or those associated with the state of the urine. As a rule it is the bone-condition which first leads the sufferer to seek medical advice, though there can be little doubt that the characteristic reaction of the urine would be found at a very early date if it were looked for. Kahler's patient, who was a medical practitioner, had albumosuria for several years. In this author's first case, the patient observed that his urine was milky several months before he felt ill, and the patient he saw in Lyons had been passing albumose for nearly a year and a half before he had to relinquish an active practice. As regards the manner in which the albumose makes its appearance there is only one observation on record, and that is in connection with the case at Lyons. This patient had an attack of pneumonia in December, 1899, from which he made a good recovery, but during convalescence traces of proteid were discovered in the urine, and the quantity gradually increased until it was as much as 10 per 1,000. If, therefore, we may be permitted to generalize from this single case, we may state that although in the developed stage the albumose is abundant, it is first excreted in traces and the amount gradually increases. It is obvious that the abnormal state of the urine is not likely to be discovered until the sufferer becomes a patient, and it is generally the condition of the bones or the associated general debility which leads him to consult a medical man. In fact, pains in the back or sides, suggesting rheumatism or neuralgia, together with progressive anemia and weakness are in most instances the earliest symptoms of the complaint. The pains are generally severe. They are aggravated by movement and are accompanied by local tenderness. A remarkable feature is that they vary in position and intensity from day to day and from week to week, and the sufferer may sometimes experience so great and prolonged a relief that his friends and even the medical attendant may be deluded into the belief that a real improvement is taking place. The patient in the author's first case, after being confined to bed for weeks in great agony, recovered sufficiently to go into the country, where he used to walk in the

garden; but before many months the pains returned, and were ended only by death. Physical examination of the bones yields results which differ greatly in different cases. In the case referred to above no enlargement or tumor was felt, but the spine was fixed and bent, while the ribs seemed to have lost their natural rigidity, so that the chest-walls appeared to yield under the pressure of the hand or of the stethoscope, and irregularities suggesting fractures could be felt by the finger. In the other two cases which he has seen distinct tumors were observed in relation to the bones. The Lyonese physician had a semifluctuating swelling about the size of a large hen's-egg in connection with one of the ribs, and the X-rays showed that there was a breach of continuity of the bone. The only tender spot that could be found was on one of the ribs over the præcordium. The spinal column was quite movable. Anemia and lassitude were profound toward the close, but presented no special characteristics.

Bradshaw regards prognosis in the following light: The course of the disease is from bad to worse, though, as has already been stated, it is not always uniformly so. It is rare for life to be prolonged for a year after the symptoms are sufficiently pronounced to lead the patient to seek advice, but in Kahler's case it is alleged that some symptoms were present eight years before death. The prognosis is pretty much the same as in malignant diseases; death may be due to exhaustion or to some intercurrent disorder, of which pneumonia seems to be not infrequent. The author's first case developed pneumonia while he was watching the disease, but recovered, to die six months later, worn out by pain, weakness and diarrhea. The Lyonese patient died a week after Dr. Bradshaw's visit, from acute pneumonia, while the bone disease seemed to be not far advanced. It is an interesting fact that in the former case, the presence of albumose was recognized in the pneumonic sputum.

**Spastic Obstipation.**—The conscientious and successful treatment of chronic constipation is no light task. Too often these cases are treated without any attempt to seek the cause of the patient's trouble. An "opening diet" is glibly prescribed, and this is perhaps supplemented by a few oil injections and a powerful and temporarily certain purgative. By this means the physician is for the time being rid of a troublesome patient, and the latter is after a while forced to seek aid elsewhere. Spastic obstipation is one form of chronic disease that is frequently not even suspected. It was first described by Cherevski, and recently has been investigated fully by Westphalen. It is described at length in Ebstein's recent work on practice. It is most common, writes VON SOHLERN (Berl. klin. Woch., Sept. 29, 1902), in neurasthenics, and occurs often in association with enteroptosis. Mixed forms of the disease are those in which atony of the bowel or mucous colitis are present. Von Sohlern narrates the clinical histories of a group of cases. An analysis of these cases shows the following symptoms to be of primary importance. The patient is unable to defecate properly; sticking pains or cramp-like sensations occur, and during the spasm the affected part of the intestine can be palpated as a cord-like mass. Spasmodically contracted intestine must not be confounded with masses of gut filled with feces; the latter can be indented and are not painful. Constipated stools are constantly present. Hyperesthesia of the abdominal wall and absence of the pharyngeal reflex, are not specific symptoms but are attributable to the underlying nervous state. In the intervals the patient often feels well; there is an absence of meteorism in many cases, implying an absence of the fungi and bacteria which cause fermentation and putre-

faction and lead to constant discomfort in other forms of intestinal disturbance. Westphalen and others regard the presence of pencil-shaped fecal masses as diagnostic, but von Sohlern is unable to confirm this. Muscular exercises, so useful in other forms of obstipation, are inadvisable in spastic obstipation; on the contrary, rest is here indicated. It is profitable to put the patient to bed for a period of thorough rest. At least two weeks of this treatment are necessary. The patient should not be permitted to leave the bed until defecation has ceased to be painful. Westphalen has recommended a diet rich in cellulose. Von Sohlern prefers a bland, soft, nutritious diet; by this means the intestine is spared irritation, active peristalsis is avoided and the indications of the underlying neurasthenia are fulfilled. Water should be administered freely. Warm applications by day and a Preissnitz bandage at night have a sedative influence. Internally bromide of potassium is useful. If enemata are needed lukewarm salt solution should first be tried.

**Chloride of Ethyl and Cancer.**—There is usually a certain reserve as to adopting new methods of treatment for affections long since determined incurable. Among such new methods the following is offered by F. Howitz (Sem. méd., Sept. 24, 1902) for treating cancerous growth by refrigeration. It consists, after having curetted the affected parts thoroughly, simply in working upon them a spray of chloride of ethyl which must be repeated every two or three days. Under the influences of this refrigeration the tissues take on a white color, which is less distinctly seen within the cancerous growth itself. This particular point has an important bearing upon the diagnosis. The effects of this method of treatment show themselves by the disappearance of hemorrhages and of the foul-smelling discharge. At the same time fleshy granulations appear, and a healthy discharge is developed from the cancerous growth. Pain is also apt to disappear. He has tried this method on 34 cases, chiefly inoperable cancers of the uterus and vagina, and although the refrigeration is capable of destroying the tissues, this author has never seen the least harm come from it in treating carcinoma.

**Relation Between Human and Bovine Tuberculosis.**—Every serious contribution to the study of this much-debated question should be welcomed. Evidence has not been lacking, since Koch's startling utterance at the London Congress, to show that cattle are not wholly immune to tubercle bacilli derived from infected human beings. Such evidence has been presented by Thomassen, Bang, Svenssen, Klebs, Orth and others. But what was really wanted, according to J. FIBIGER and C. O. JENSEN (Berl. klin. Woch., Sept. 22, 1902), in order to disprove Koch's hypothesis, was the demonstration of cases in which the tuberculous process was localized in the alimentary tract and in which the infection could be reasonably traced to cow's milk, likewise in which the bacilli possessed the same virulence for cattle as the bacilli of bovine tuberculosis itself. The investigation undertaken by these writers sought to test the virulence, for cattle, of tubercle bacilli obtained (a) from cases in which the autopsy indicated that the infection probably had occurred through the alimentary tract, and (b) in cases of undoubted primary intestinal tuberculosis. In a case of the first variety a positive result followed the inoculation of a three-months-old calf, previously tested with tuberculin. Typical fresh tubercles were found in the peritoneum; but the bacilli appeared to possess but little virulence. In cases belonging to the second variety the bacilli derived from different human subjects varied in their virulence for calves. Some were non-virulent, others

moderately virulent, and still others intensely virulent. Curiously enough the virulence of the bacilli was found to diminish as the age of the patient and the probable duration of the disease increased. While the number of cases included in these experiments does not justify the formulation of a law, the question naturally presents itself, Is it not possible that the virulence of tubercle bacilli for cattle gradually diminishes during the life of the bacillus in the human organism? It should be remarked here that Max Wolff very recently showed that tubercle bacilli of very great virulence for cattle may be found in elderly persons; in the case he reported, however, the intestinal tuberculosis from which the patient suffered had been present probably not more than a year. Koch declares that the subcutaneous inoculation of calves with tuberculous material can be used as a test to show, in a given case, whether the infection is due to human or to bovine tuberculosis. If this be so, the experiments described in this article, and those of Wolff as well, demonstrate the presence in human beings of tuberculosis of bovine origin, and the claim of the harmlessness of bovine tuberculosis to human beings falls to the ground.

**Multiple Hereditary Exostoses.**—A boy of nine years, upon whose chest and extremities the parents had begun five years previously to notice the appearance of small, slowly developing and painless growths, was presented for treatment to D. JUNGEMANN (Berl. klin. Woch., Sept. 22, 1902). Inquiry revealed the hereditary character of the trouble. The boy's father, grandfather, aunt and sister were similarly deformed. These growths rarely, and only accidentally, produce serious discomfort. Medical aid is sometimes sought when trauma has caused a change to take place in the character of the tumor. Occasionally pain may be produced by pressure on neighboring tissues. Symmetrical growths are relatively common. From the standpoint of prognosis it is important to remember that Hartmann has demonstrated the possibility of "lacunar absorption." During a long period he observed the gradual absorption of a number of exostoses. A few cases of congenital exostoses have been described by Hutchinson, Vix, Dreher and Reulos. As a rule the growths are first noticed three or four years after birth. Rickets is an intimately related condition; indeed Volkmann believed the disease to be merely a special form of rachitis, though Helferich and Bessel-Hagen saw reasons for regarding the growth of multiple exostoses as a disease sui generis. A careful analysis by Jungemann of the cases which he describes leads him to side with the last-named writers.

**Early Diagnosis of Icterus.**—The importance of this symptom in clinical pathology makes its early recognition most desirable. As the icteric staining of all tissues must necessarily come from the presence of the bile-pigments in the blood-serum, HAMEL (Deut. med. Woch., Sept. 25, 1902) proposes that in suspected cases the serum be subjected to a clinical test. A fine capillary tube about 10 cm. long may be filled with blood from a puncture-drop at the lobe of the ear and both ends sealed with wax. If left in an upright position the serum will separate in a few hours from the corpuscles and its color may be examined. If bile-pigment is present a yellowish discoloration can be readily observed, which is in sharp contrast to the usual colorless appearance of the serum when exposed in a thin layer.

**Amyl-Nitrite Burns.**—The danger attending the use of this drug under certain conditions is made the subject of a warning by E. A. SCHUMWAY (Phil. Med. Jour., Oct. 11, 1902). He reports a case, a patient subject to attacks of Jacksonian epilepsy, who during a



convulsion accidentally threw the contents of a small bottle of amyl nitrate into his right eye. As a result there was a deep burn of the cornea and conjunctiva, which extended out over the face. Despite prompt treatment the cornea sloughed and the eye was destroyed, with a resulting cicatrix extending down over the face to the middle of the upper lip. The author believes that the drug by repeated exposures to light and air had decomposed and at the time of use consisted largely of a mixture of nitric and nitrous acids, to which the severe burn was due. He therefore advises extreme care in keeping and recommends the "perles" alone for ordinary use.

**Limits of the Kidneys' Resistance to Diuretics.**—The ultimate effects upon the kidneys of prolonged administration of diuretics in therapeutic doses has been studied experimentally by G. DONZELLO (*Rif. Med.*, Sept. 13 and 15, 1902) through observation of the influence of diuretin and euphorin upon the renal tissue and urinary secretion of healthy rabbits. Both remedies induced increased elimination of urine for a period of from two to three weeks, after which time there was a gradual diminution in the amount voided and finally subnormal secretion. Withdrawal of the drugs was followed by a return to the normal, and a second course of treatment brought about a repetition of the effects first noted, although the initial diuresis was not so marked. Histological examination of the kidneys of rabbits so treated showed certain abnormalities, such as hyperemia and dilatation of tubules and epithelium; yet these structural changes were not evidenced by the appearance in the urine of albumin or other abnormal constituents. Although the quality of the urine was not altered by continued renal stimulation, the author maintains that the condition of renal exhaustion shown after persistent use of diuretics points to the necessity for their intermittent administration, lest the onset of functional paresis and consequent uremia be hastened rather than retarded.

**Blood-pressure in Disease.**—The blood-pressure in a number of conditions has been investigated by I. BUTTERMANN (*Deut. Arch. klin. Med.*, Vol. 74, Nos. 1 and 2) with the following results: In many cases of acute nephritis the pressure rises considerably very soon after the beginning of the disease; thus in one convalescent from scarlet fever it had increased by 50 mm., 48 hours after the onset of the albuminuria. The maximum is reached in several days, and the fall is proportionate with the general improvement. At the same time there is found by examination of the heart an accentuation of the second sounds at the base and a heaving impulse at the apex, with or without dilatation of the ventricle. In mild cases the increased tension was not seen, and it was also absent in a case of typhoid, with much albumin and blood in the urine, and in amyloid disease of the kidneys. All cases of chronic interstitial nephritis ran their course with increased blood-pressure, but this was not constant with the parenchymatous form, where normal and even subnormal pressures were frequently encountered even though the heart was affected. Venesection was performed on several healthy persons for studying the effects on pressure, and in all a considerable lowering of some duration could be recorded. The examination of several cases of lead-intoxication, presenting colic with a moderate albuminuria and cylindruria as the main signs, were negative. In persons with cardiac disease, when exercising, the rise was equivalent to that of normal individuals, provided compensation was good and no marked dyspnea developed. In others there was a fall of 3 to 14 mm.

**Sarcoma of Stomach.**—Round-cell and lympho-sarcoma occur more frequently in the stomach than

spindle-cell growths, and mixed types are still more rare according to J. PSTOKONSKI (*Zeitsch. klin. Med.*, Vol. 46, Nos. 1 to 4). The most frequent seat of these neoplasms is the greater curvature and the pylorus, and they generally take their start from the submucosa or muscularis, less frequently, the mucosa or subserosa. With the extent of the growth all the walls will be infiltrated, but least often the mucosa, so that ulceration is uncommon. The growth may be diffuse or circumscribed and in the former case the infiltration is more marked in the central than in the peripheral parts. Ultimately the entire stomach may be involved, leading to considerable increase in size and thickening of the walls. Where there is one tumor, it may project outward and reach a very large size, or inward when it is smaller and more fungous in character. The growth is slower than that of carcinoma, and, as a rule, it requires three to four years before death sets in, which accounts for the frequency with which large tumors are encountered at autopsy. The greatest tendency to form metastases is found in the lymphatic and round-cell varieties, and they occur in the lymph-nodes of the gastric region, peritoneum, liver, mesenteric, retroperitoneal and inguinal glands; less often in spleen, diaphragm, intestines, pleura, pancreas, suprarenals and kidneys. Several cases are reported where the ovaries were involved in young girls. The metastases not rarely undergo retrograde changes and do not reach the large size of cancer metastases. In most cases it is impossible to diagnose during life the nature of the growth, but where the course of the disease is much prolonged suspicion should be aroused. Here the onset is with anorexia, eructations, fulness and pain in the epigastrium, vomiting, at first after eating and later independent of this, constipation or diarrhea. Later, a resistance or tumor can be palpated, which increases, but slowly. Free hydrochloric acid is found more often than with carcinoma, since the mucosa remains intact. Hematemesis and vomiting of coffee-grounds material is rare. Sarcoma of the stomach occurs in young or middle-aged individuals, and rarely after the age of fifty. Females are somewhat more frequently affected than males. Enlargement of the spleen is frequent, but of no value in differential diagnosis.

**Renal Insufficiency.**—The inefficient results obtained by the usual urinary analysis when an exact determination of renal function is necessary is dwelt upon by A. LANDBAU (*Zeitsch. klin. Med.*, Vol. 46, Nos. 1 to 4), who discusses the supposed value of subcutaneous injections of methylene-blue in amounts of half a gram before all operations upon the kidneys. The dye undergoes a change in the system and is excreted as a greenish body and a colorless chromogen, and valuable data are derived from the time that elapses before excretion begins and from the duration of excretion. In normal individuals the first traces of color are detected in 15 to 20 minutes after the urine is boiled with acetic acid to reduce the chromogen, and after 48 hours the excretion is at an end. Three types of pathological elimination are observed: (1) Longer duration, with delayed onset; (2) shorter duration, with more recent onset; (3) shorter duration, with delayed beginning. The first variety is looked upon as characteristic for atrophic renal inflammation, the second for acute and chronic parenchymatous lesions, and the third shows considerable impermeability and severe disturbance of function. A number of cases were examined by the author to test the correctness of these views. In three severe cases of acute nephritis there was a slight retardation with somewhat prolonged excretion. One case of chronic parenchymatous lesion gave no evidence of earlier onset, neither did the results correspond in the interstitial form. In congestion secondary to car-

diac insufficiency slight changes belonging to the first type were present. It follows from all these experiments that the value of the method has been much overestimated, for slight variations only may occur when clinically the proof of renal insufficiency is yielded by severe uremic symptoms. And even if an insufficiency may be disclosed its degrees and cause remain dark, and no clue is given as to the anatomical nature of the lesion.

**Diagnosis of Diabetes.**—In the majority of cases diabetes is a disease so readily recognized that even a medical student who has never before seen a case will diagnose correctly. Yet none of the typical signs may be present, the patient may be unobservant, and the necessity for making an immediate examination of the urine not to be evident. It is then well to remember that there are two symptoms which are nearly always present in the severe cases, and that these are emaciation and a pronounced feeling of muscular weakness. The latter amounts at times almost to paresis, and more commonly than this the patient exhibits a muscular weakness which is more marked than that seen in other diseases in which there is equally imperfect nutrition. It is a weakness which is extremely suggestive of a toxic origin, and may be an actual neuritis. Other suggestive signs are itching, especially of the genitalia, balanitis, furunculosis and the development of carbuncles, cataract and loss of accommodation, bilateral sciatic neuralgia, signs of locomotor ataxia, impotency and gingivitis. Furthermore, D. L. EDSALL (Medicine, Oct., 1902) states that an examination for sugar should always be undertaken in persons at all obese and in those who are gouty or neurotic. The chief difficulties are met with in determining the nature of cases where a doubtful reaction occurs or in which a distinct reaction is obtained only once. Concerning the former question, the doubt will often be cleared by first diluting the urine or by passing it through a filter composed of animal charcoal, or, best of all, by the use of the fermentation-test or the polariscope or the phenylhydrazin-test, though with the latter glycuronic acid may give similar crystals. The blood-tests of Bremer and Williamson are of interest, but not of importance in actual diagnosis. A single urinary analysis is never sufficient, and one must be sure that the sugar, when found, has actually been passed with the urine as hysterics have practised deception and the urine may be sent in a bottle containing a saccharine solution. In severe shock, poisoning, or acute disease there may be a misleading, transient glycosuria, and to settle the question the patient should be put on saccharine and starchy food for at least a week and the urine repeatedly tested. The existence of a lactosuria with pregnancy must also be borne in mind. For determining the gravity of the intoxication the tests for diacetic acid and acetone can be applied, and where more complicated apparatus is at hand the estimation of beta-oxybutyric acid and ammonia, the latter especially forming the readiest and most exact method, for clinical purposes, of determining the degree of acid intoxication.

### SURGERY.

#### Tumor of the Spinal Cord; Operation; Recovery.

—The complete enucleation of a benign tumor of the spinal cord, followed by rapid healing of the wound and the complete recovery of the patient, are the interesting features of a case reported by H. OPPENHEIM (Berl. klin. Woch., Sept. 29, 1902). The patient, a girl of eighteen years, first complained of pain on the right side of the abdomen. This was soon supplemented by some stiffness and loss of power in both lower extremities, especially the right. Incontinence of feces was a temporary phenomenon, but ceased spontaneously and

was not repeated. The bladder function was at no time disturbed. Moderate scoliosis was present, but no tenderness could be elicited in the spinal region. The slight degree of paresis involved both lower limbs; it was of the spastic variety. On the right side ankle-clonus was present and the Babinski reflex was obtained. The abdominal reflex was lacking in the lower right umbilical region. The existence of a tumor pressing on the spinal cord seemed probable. Examination with X-rays showed only the scoliosis. The pressure-symptoms gradually increased in intensity. Tuberculin was utilized for diagnostic purposes, and the result was negative. Girdle-sensations appeared in the region of the ninth, tenth and eleventh dorsal nerve-roots; below the umbilicus no abdominal muscular reflex could be obtained on either side; spastic paresis became more marked; the patient began to experience difficulty in emptying the bladder and obstipatio alvi developed. The clinical history justified the supposition of the extramedullary localization of the growth, and operation was resorted to. The arches of the ninth and eighth dorsal vertebrae were exposed and removed and the dura was divided, exposing a tumor  $3\frac{1}{2}$  cm. long and half as thick, springing from the dura but fused with the arachnoid at certain points so as to be separable only with difficulty. Histological examination revealed the fibromatous character of the growth. The wound healed without suppuration. During the first few days following the operation the cerebrospinal fluid escaped in considerable quantities, and a striking tachycardia appeared. The subsequent history relates to the rapid disappearance of all the pressure-symptoms which led to the operation.

**Appendicitis.**—In an article on the medical treatment of appendicitis J. BURNET (Lancet, Oct. 4, 1902) closes with the following summary: After all has been said, there still remains the difficult question to answer, When are we in duty bound to call in a surgeon? It is impossible to be dogmatic. For his own part, he thinks a surgeon should only be called in when, in spite of the careful carrying out of medical treatment, the patient's condition is evidently becoming worse. In dealing with appendicitis one is apt to expect too much in the way of improvement from day to day. During the satisfactory progress of many of these cases, the improvement is sometimes hardly perceptible, but if it is observed after a careful estimation of every factor involved one is warranted in persevering with medical treatment rather than in summoning a surgeon. He has no hesitation in saying that many cases of appendicitis are operated on that would have made a good and even speedy recovery under medical treatment pure and simple. Surgeons urge that there is less risk in operating while the patient's strength has not yet been exhausted than in letting the disease run its course. This is to a certain extent true, but one can do a great deal to carry the patient through his illness, and to prevent complications setting in, by careful attention and intelligent medical supervision. Treatment during convalescence, too, is of great importance. When the temperature and pulse have remained normal for about a week the patient may be gently lifted on to a couch for a few hours each day. At the end of a month or six weeks, he should be sent to some bracing but quiet country place. During this period the greatest care in dieting is necessary, as is also the avoidance of constipation. Nothing that is in the least likely to upset the digestive organs should be taken, and the bowels must be made to act once a day. The convalescent should be warmly clad, woolen underclothing being most essential. He must be careful to guard against chills, and he should always be indoors before sunset.



Some people, even though they have been warned, are very heedless in regard to these matters, and so one should always make a point of impressing on them the utmost need for careful attention to the advice given them. In conclusion, if medical treatment is to succeed in any particular case, it must be undertaken with more than ordinary care and watchfulness. Only in such circumstances will it be found to be of value.

**Rare Cause of Death.**—Tonsillar abscesses are common enough in the practice of everyone who has a clientele of ordinary numbers. Death from the bursting of such abscess, however, is certainly a great rarity, and the report of a case by A. LYONS (*Lancet*, Sept. 20, 1902) is worthy of note. The man, aged twenty-eight years, was admitted at 9.30 A.M., August 13, suffering from a very large left suppurating tonsillitis. He was given a warm bath, was put to bed, and drank a glass of milk. After half an hour the nurse heard him cough feebly, and going to ascertain the cause, was surprised to find him cyanosed. The reporter was immediately summoned, but before arrival the man was dead, although only five or six minutes had elapsed from the time the nurse noticed the cyanosis and sent the messenger after him. At the autopsy it was found that the abscess had burst, and that a large quantity of the pus had entered the upper part of the lungs. So far as literature shows, only one case of the same kind has been recorded, and that by Hilton Fagge.

**Tumor of the Spleen.**—A remarkable case is reported by ERBKAM (*Deut. med. Woch.*, Sept. 25, 1902), in which a large tumor of the spleen of a pseudoleukemic nature was extirpated with beneficial results. The patient, an anemic but fairly well-developed woman, presented a large, movable abdominal tumor on the left side, extending from the costal margin to the true pelvis. The abdominal cavity was entered by an incision along the outer margin of the rectus. The tumor was surrounded by adhesions, especially firm between the pancreas and its posterior surface, but it was successfully removed with only a moderate loss of blood. The recovery was uneventful, and a year later the patient was in perfect health and had made a reasonable gain in weight. Blood examination at this time was negative.

**Treatment of Gastropotosis.**—A method of suspending the stomach in a hammock made of the great omentum is proposed by R. C. COFFEY (*Phil. Med. Jour.*, Oct. 11, 1902). He applied it in two cases with marked displacement of stomach and colon and secured permanent relief from all symptoms. After freeing the stomach from any adhesions which may be present the omentum can be secured to the anterior abdominal wall by a single row of chromic gut-sutures introduced about an inch from its gastric attachment. If the abdomen is much relaxed and the colon shows a decided tendency towards prolapse it will be well to put two rows of sutures across, penetrating the entire thickness of the omentum just below its attachment to the colon. In this way a broad line of adhesions will be constructed so that it will be practically impossible for these organs to become prolapsed. It affords additional supports to the stomach, namely the posterior attachment of the mesocolon and the anterior attachment of the omentum to the abdominal wall. The dilatation which usually accompanies gastropotosis will also be relieved. The transverse colon being in the folds of the great omentum cannot be displaced downward, therefore this operation will greatly benefit enteropotosis by supporting the weight which would otherwise be riding the small intestine into the pelvis.

**Points on Treatment of Fractures.**—Since the advent of aseptic surgery the attitude of many surgeons in the treatment of difficult cases has entirely changed.

The X-ray has furnished us with the means of more exact diagnosis, and operation with the replacement of the fragments is now more frequently resorted to. W. A. LANE (Practitioner, Sept., 1902) urges the advisability of immediate open operation upon those cases of fracture where the fragments cannot be replaced, especially in the instances of epiphyseal separations in children. It is often impossible to replace fragments by manipulation alone, and although nature performs wonderful changes to compensate for the misdeeds of the surgeon, yet the importance of accurate reduction in determining the future usefulness of the limb is so great that the utmost care should be observed. The dangers from operation are constantly being lessened, and it is to be hoped that they will soon reach such a minimal point that able surgeons will not hesitate to replace by sight the displaced fragments about a joint.

**Closing of Celiotomy Wounds.**—In order to avoid unsightly scars and prevent subsequent hernie, A. H. GÖBLER (*Med. Rec.*, Oct. 11, 1902) recommends the following method of making and closing the laparotomy wound. The skin and fat are divided in the median line down to the fascia covering the muscles. Then one side of the wound is retracted and the fascia, about a third of an inch from the median line, is nicked with a knife and split up and down with scissors to the limit of the skin incision. The muscle is then separated with the fingers down to the peritoneal fat. In closing the wound a continuous suture of No. 1 chromicized catgut is applied, beginning at the upper end of the incision, the first layer including the peritoneum, subperitoneal tissue and the lower border of the muscle. By including the muscle in this suture pockets for the accumulation of serum and blood are avoided. The second layer takes in the fascia and upper border of the muscle. The margins of the skin may be drawn together by the subcuticular suture or narrow strips of adhesive plaster. It is essential that all bleeding should be arrested before the integument is approximated.

**Resection of Gangrenous Intestine.**—Several instances are now on record where large portions of the small intestine have been resected and recovery followed. Fantino has removed ten feet and four inches from a woman of sixty, and Ruggi, after tearing the mesentery from a long strip of intestine, was obliged to remove 11 feet. G. R. HARRIS (*Med. Rec.*, Oct. 11, 1902) was called 12 miles to see a case of intestinal obstruction, and after the patient had been carried in an ambulance that distance to a hospital the abdomen was opened and found to be full of a serosanguinous fluid. There was a band of constriction across the ileum very near to the cecum, necessitating removal of the small intestine close up to that organ and for a distance of seven feet and ten inches. The ileocecal opening was closed by inverting the cecum at that point and using Lembert sutures. A Murphy button half was previously placed in the cecum and an opening made near the appendix. The other free end of the small intestine was then closed, the other half of the Murphy button having been placed within it and brought out through the side wall. A lateral anastomosis was thus made between the small and large intestine and the external wound sewed up. Vomiting was a disagreeable feature for several days, but the patient subsequently made a very good recovery.

**Tuberculosis of the Testicle and Epididymis.**—I. ABELL (*Medicine*, Oct., 1902) states that the epididymis is the most frequent starting-point of urogenital tuberculosis, being generally secondary to some other focus, but rarely primary. The testicle is rarely primarily affected. When the process begins in the epididymis it is probably intertubular; when it is secondary to other foci in the urogenital tract, constituting

a descending infection, it is probably intratubular. Foci in other parts of the genital tract, or even distinct lesions, do not contra-indicate operation, since clinical evidence proves that when operated early healing of distant lesions may occur. Castration should be limited to those cases where the process has invaded the testicle proper; in all others epididymectomy with high resection of the cord is to be practised.

**Operative Treatment of Anasarca.**—The edemas so common in nephritis may be dealt with surgically in two ways; either free incisions are made or the tissues are punctured with trocars connected with drainage tubes. S. TRZEBINSKI (*Zeitsch. klin. Med.*, Vol. 46, Nos. 1 to 4) prefers the latter method, since the danger of infection is less and the healing quicker; since the amount of fluid obtained is larger; and finally, since the dressing is not so frequently moistened and does not require constant changing. The best place to introduce the trocars is several cm. above the external malleolus, in an upward direction, and lateral opening are not necessary. Immediately after insertion the fluid will drop out and connection should be made with a bottle by the side of the bed. The relief is sometimes very marked, though as a rule only temporary. The indications for use are all cases of anasarca not relieved by the usual cardiac and diuretic drugs; the contra-indications, where there is a tendency to necrosis, as in diabetes or tabes. There is no more danger from collapse than with the incisions.

### EYE, EAR, NOSE AND THROAT.

**Postoperative Results of Simple Chronic Glaucoma.**—A careful analysis has been made of 50 cases of simple chronic glaucoma that were treated and operated upon by C. S. BULL (*Med. Rec.*, October 4, 1902) in private practice. In 44 cases both eyes were involved. The ages varied from twenty-six to eighty-four, but the decade in which most cases occurred was between sixty and seventy. There was a temporary improvement in central vision in seven eyes; a permanent improvement in three eyes; immediate failure in central vision in two eyes; gradual failure in 58 eyes, and a maintenance of the vision existing at the time of operation in 24 eyes. A careful study of these cases has led to the conclusion that where the disease exists in both eyes of a patient better results as to visual acuity and the field of vision are obtained by simultaneous operation in both eyes. The effect of iridectomy is more certain the earlier it is done, and the slightest narrowing of the field, whether for form or color, demands operation once our diagnosis is made. The curative action of iridectomy stands in direct proportion to the amount of tension. Early iridectomy, while the iris is still mobile, the field but little contracted, and the cupping of the disk slight, very often arrests the disease, at least for a long period, and preserves what sight remains.

**Diphtheritic Conjunctivitis.**—Culture and proof by inoculation take considerable time. Hence a differential diagnosis between xerosis bacillus and Klebs-Löffler bacillus must depend entirely on the clinical picture, for effective antitoxin treatment cannot wait for the slow processes of the pathological laboratory. Clinically, diphtheritic conjunctivitis can be diagnosed, writes M. STANDISH (*Bost. Med. and Surg. Jour.*, Oct. 2, 1902), by the appearance of a marked velvety congestion of the conjunctiva, both upper and lower lids, with lachrymation and slight, if any, mucous discharge for three or four days. Afterwards the conjunctiva becomes densely infiltrated, the upper lid hangs over the lower, and there appears upon the conjunctiva, first upon the tarsal surface of the upper lid, a definite, tough, dirty-white, closely adherent membrane. If this

is separated, which is done with difficulty, the surface beneath bleeds. There is some slight mucopurulent discharge, great chemosis, and considerable edema of the lids. Concerning the treatment by antitoxin, Dr. Standish describes the results of the treatment of 25 cases of diphtheritic conjunctivitis occurring among 8,000 cases of diphtheria at the Boston City Hospital. In all these cases the Klebs-Löffler bacillus was present in the discharges from the nose. Eight cases were admitted for ocular diphtheria; the others were faucial diphtheria which had incidentally a membrane on the conjunctiva. All were treated with antitoxin, the first dose being 4,000 units. Usually a second dose of like amount was given at the end of six or eight hours, and some had three or four injections. Such cases in 24 hours usually were doing well, and after 48 hours no more anxiety was felt for the eyes. In those cases in which there were corneal ulcerations the antitoxin favorably affected the corneal lesion, and with the exception of four cases the patients left the hospital with good vision. In one of these four cases the cornea upon admission seemed to be wholly necrotic. Six months later there was considerable vision. An opaque scar occupied approximately half the cornea. In the three other cases every cornea was lost. These three patients had diphtheritic infection during an attack of measles. This probably accounted for the severity of the corneal process. This report indicates a great advance from the day when ophthalmologists agreed that retention of vision after diphtheritic conjunctivitis was not to be expected.

**Foreign Body in the Nasopharynx.**—The presence of a foreign body in the nasopharynx is, strange as it may seem, a comparatively rare observation. One is reported, however, by R. LAKE (*Lancet*, Sept. 20, 1902), which may be of service in general. The patient, a married woman, forty-eight years old, was sent to him for an opinion as to involvement of the accessory nasal sinus. The peculiar history was as follows: For some years the patient had drawn from the nose every morning either matter or matter with hard, offensive crusts. At times these were, according to her description, covered with mildew. The total duration of the trouble was, perhaps, 14 years. The so-called matter was probably mucopus. On examining the patient there was obviously a dry rhinitis sicca et atrophica and a nasopharyngeal occlusion. Both could be distinctly seen, covered with a crust of congealed mucus, blackish in color. The nasopharynx was so irritable that it was impossible to get any view from behind. About eight months after the first examination the patient again appeared, stating that she had a feeling of burning in the tongue, but it was still impossible to look at the nasopharynx. He then ordered the use of peroxide of hydrogen, 10 volumes, to the vault of the nasopharynx, by means of a postnasal syringe. Three days later a large fragment of the wing of a seed-vessel of an ash or sycamore tree was removed by the patient. It is impossible to say when this peculiar foreign body was introduced into the nose, and it is also equally impossible to do more than generalize as to whether the inflammatory condition of the nasopharynx was the result of its presence or whether the patient had suffered from some such condition before, which had permitted the entrance and retention of the foreign body. After removal of this fragment the patient's condition greatly improved.

**The Dangers of Cocaine in the Eye.**—The practitioner is generally led to prescribe instillations of cocaine every time there is a painful affection of the eye; but according to E. FUCHS (*Sem. méd.*, Sept. 24, 1902) this method is almost useless and has a number of dis-



tinct dangers. He claims that the affections of the conjunctiva are not sufficiently painful to warrant the use of this drug, while lesions of the depths of the eye do not lose their pain in the presence of cocaine. Affections of the cornea, which sometimes are painful, and which therefore might indicate the use of cocaine, are not very amenable to its application, because the analgesic effects of the drug are not lasting, and the drug itself is far from being inoffensive to the cornea itself. In fact, it is possible to find in a normal cornea considerable reaction accompanied by a desquamation of the epithelium after a general instillation of cocaine—for example, as practised for the operation of chalazion. Such are always accompanied by violent pain, on account of destruction of the epithelium. Consequently this authority seldom resorts to cocaine, and he does not use this medicine except with great precautions, especially closing the eyes immediately after each instillation. Instead of cocaine for the mild affections of the eye this authority prefers to use hot cloths, or cloths wrung out in hot water, placed upon the eye while the patient is lying down.

**New Treatment for Chronic Rhinitis.**—A method of treatment to which its author, D. VEDOVA (Gazz. Osped., Sept. 28, 1902) gives the name of "Rhinovaporization" is described as presenting many advantages, especially in "dry" rhinitis with crust-formation. Medicated vapor is simultaneously introduced into both nostrils by means of a simple inhalation-apparatus, devised by D. Vedova, which is provided with two delivery tubes with a small aperture at the under side for the escape of liquid which might be formed through condensation of part of the steam in its passage to the nares. The end of each tube is so constructed that it may be adjusted to the nostril. This treatment is said to be well tolerated by all classes of patients, and besides the beneficial effect of heat and moisture in softening secretions and loosening crusts it has a great advantage over other measures in that it carries medication to all parts of the mucous membrane.

**Nosebleed.**—There are countless methods advised for controlling nosebleed, and although such cases are seldom referred to the physician for treatment, yet it often happens that unless the medical adviser has given some thought to the subject he may be as helpless to relieve the annoying and even serious symptoms as the countless home remedies have been. H. W. LOES (St. Louis Med. Rev., Oct. 4, 1902) believes that in nearly every case a local examination will disclose the fact that the hemorrhage comes from a small ulcer or abrasion on the septum just within the vestibule, and that the simplest and best mode of treatment is the application of local pressure. This may be very easily applied by pinching the lateral cartilages against the septum so that direct pressure is applied to the bleeding area. The nose may be held for 5, 10, or even 15 minutes. If the bleeding is not arrested the presence of blood in the pharynx will soon be noticed, but this occurs in a very small percentage of cases and is due to a capillary oozing from various points or a localized area more deeply placed. Packing of the nostril may then be necessary and should be done only with sterile gauze or cotton. Styptics are never justifiable. Peroxide of hydrogen is sometimes of benefit and has the further claim of acting as a cleansing agent in getting rid of any decomposing clots. Adrenalin chloride is also efficacious, its effect lasting about two hours. The last two agents may be successfully applied by soaking the gauze or cotton in them.

#### GENITO-URINARY AND SKIN DISEASES.

**Formaldehyd in Lupus Vulgaris.**—After five years' study of the disease, G. MATTEUCCI (Gazz. Osped., Sept.

21, 1902) has arrived at the conclusion that lupus vulgaris is strictly a local affection and as such should be treated by ablation of nodules and destruction of the bacilli. Following a presentation of the advantages and disadvantages of the various local measures hitherto employed for the relief of this condition, a detailed description is given by the author of the method he has successfully used during the past three years. The evening before the operation a corrosive sublimate dressing is applied to the diseased part, and it is left in situ until the following day. Local anesthesia with cocaine is usually employed in the operation, though in severe cases chloroform narcosis is resorted to. The skin is put upon the stretch, thus bringing all tubercles fully into view, and thorough, deep curettage is practised, any excessive hemorrhage being controlled by cauterization. The wound is simply kept clean during the following five or six days, at the end of which time a gauze dressing saturated with glycerinated formalin, in the following proportions, is applied:

B Formaldehyd ..... (4 per cent.) ..... gram 5  
Pure glycerin ..... gram 50

This dressing is renewed daily, the painful effect of the formaldehyd being obviated by application to the wound of cotton saturated with cocaine prior to each treatment. After a period of about two weeks healing is said to begin at the edges of the wound and it proceeds uninterruptedly, the resulting cicatrix showing a certain elasticity. Recurrence, after this method of treatment, has been extremely rare in the writer's experience.

**Perineal Prostatectomy in Prostatic Hypertrophy.**—Twenty-one cases of hypertrophy of the prostate were operated on by J. VERHOOGEN (C'blatt Kr. Harn-u. Sex.-Org., Sept. 20, 1902), according to Bottini's method. Ideal results were obtained in only seven instances. Failure of this procedure is due to the fact that the method is a blind one, the operator always remaining in doubt whether he has proceeded far enough. The use of galvanocautery no doubt lessens the danger of hemorrhage, but it is not a guarantee against this danger. Moreover, the operative wound is made usually upon an infected soil, which cannot be perfectly disinfected or drained. Verhoogen favors the Bottini operation only in cases of moderate hypertrophy not seriously infected. In more advanced cases prostatectomy must be resorted to for radical cure. The removal of the middle lobe suffices only in cases in which the hypertrophy is confined to this part of the prostate. The difficulties and disadvantages of suprapubic prostatectomy are fully appreciated by every surgeon who has once performed this operation. The perineal route, on the contrary, offers the shortest path to the prostate, which in this operation is easily and completely exposed. Verhoogen recites the history of three patients on whom perineal prostatectomy was performed with highly satisfactory results. The necessity of narcosis is a disadvantage as compared with the less radical Bottini operation. Fears are expressed by some operators concerning the extensive trauma which perineal prostatectomy necessitates, but as a matter of fact the trauma is not much greater than that inflicted when galvanocautery is freely applied. In simple cases without cystitis and in which the catheter can be readily passed, no operation whatever should be undertaken.

**A Method of Circumcision.**—On account of the disagreeable hemorrhage and the subsequent edema which often follow the ordinary methods of circumcision, in which many blood-vessels and the subcutaneous tissues are cut or torn, W. C. KLOTZ (N. Y. Med. Jour., Oct. 14, 1902) suggests a means by which these annoyances may be avoided and more accurate results be obtained. The prepuce is first retracted as far as possible toward the root of the penis and cocaini-

zation performed. A circular incision is then made around the penis from two to three inches from the coronal sulcus and parallel to it. Another circular incision is then made about half an inch behind the coronal sulcus, and a dorsal longitudinal incision joins the first two. Beginning at the dorsal incision, the cuff of skin outlined by these incisions is carefully dissected away from the subcutaneous tissues, the previous incisions having been made only through the skin. When the cuff is removed the posterior cut edge is drawn forward and sutured to the free edge just behind the corona. Primary union without edema should be obtained. When the prepuce is tight and cannot be retracted the dorsal incision may be made first. The operation was first suggested by von Zeissl for the treatment of irreducible chronic paraphimosis.

**Treatment of Gonorrhea.**—A new method of treating this malady by packing the urethra with an antiseptic oiled dressing is announced by S. T. RUCKER (Jour. Am. Med. Assoc., Oct. 11, 1902). The procedure is as follows: After the patient empties the bladder the urethra is irrigated with a hot solution of potassium permanganate (1-3,000), preferably with the Valentine irrigator. A tubular gauze packer, modified to fit the urethra is then introduced and passed back about four inches in anterior gonorrhea, and to the neck of the bladder in posterior gonorrhea and prostatic troubles. The urethra is then lightly packed with one-inch continuous gauze strips, or better, a loosely spun cotton cord, saturated with one of the solutions named below. The instrument is gradually withdrawn as the dressing is pushed through. The latter is left projecting a short distance outside of the meatus. The patient is instructed to go as long as possible before urinating, when the packing is slowly removed. The average patient will go from five to eight hours. The author packs the urethra once a day until after the discharge ceases, then every other day for 10 days or two weeks. The method has been successfully used in a number of cases, the discharge ceasing in from two to five days. The solutions are as follows: (1) Iodoform, gr. xcv; Balsam of Peru,  $\text{ʒiv}$ ; Ol. Ricini, q.s. ad  $\text{ʒiv}$ ; or (2) Ichthylol and Resorcin, aa, gr. xl; Balsam of Peru,  $\text{ʒiv}$ ; Ol. Ricini, q.s. ad  $\text{ʒiv}$ .

### THERAPEUTICS.

**Keloid.**—A favorable effect is reported by several authorities from injecting into the keloid until pale a 20 per cent. solution of creosote in olive oil. Inflammation, tumefaction and sloughing usually result, and when healed over, injections are again made. Thiosinamin is also used by injecting c.c. 0.65-1.3 (10 to 20 minims) of a 10 or 15 per cent. solution in alcohol or in equal parts of glycerin and water. Tousey, Newton, Crocker and Pernet obtained good results, but Jackson, in a number of cases, failed. It may also be given in dose of 0.2 gm. (gr.  $\text{iiij}$ ) daily by mouth.

—STELWAGON in "Diseases of the Skin."

**Intratracheal Medication.**—Attention is called to the value of this method of treatment by E. FORSYTH (Buffalo Med. Jour., October, 1902), who during a period of five years has had excellent results from its use, especially in tuberculous cases. He states that under such medication expectoration is greatly reduced in quantity and becomes much less offensive; the purulent element disappears and the expectoration resembles the frothy expectoration of simple bronchitis. Fever and night-sweats disappear, and the patient gains in weight. The solutions used are menthol 7½ to 15 per cent.; guaiacol ½ to 3 per cent. in benzoinol or alboline; 1 to 4 drams being injected at a sitting. The technic of the procedure is described as follows: The patient draws the tongue forward with the right hand, at the

same time throwing the head back and opening the mouth as widely as possible. The operator holds the laryngeal mirror in one hand and syringe in the other, and proceeds as though he were about to make a laryngeal application. As soon as the tube enters the cavity of the larynx the epiglottis is pulled slightly forward, the patient is instructed to breathe, the cords separate, the tube enters between the cords, and the syringe is emptied of the desired amount. By pointing the instrument to either side the bulk of the medication may be made to enter either the right or left bronchus.

**Hemoptysis.**—There is no doubt that of all the internal remedies for hemorrhage of the lungs, aconite is the best. If the patient is too much exsanguinated to use sedatives place the head lower than the feet and apply Esmarch bandages to the limbs. If the hemorrhage is just beginning, the following may be inhaled from an atomizer throwing a fine spray:

℞ Liquor ferri subsulphat. .... 1.3-2.0 (℥xx-xxx)  
Aque dest. .... 120.0 (ʒiv)

M. et Sig. Use every few minutes.

Or ℞ Acid tannici ..... 1.3 (gr. xx)  
Glycerini ..... 8.0 (ʒij)  
Aque dest. ad ..... 90.0 (ʒiij)  
Or ℞ Aluminis ..... 0.4 (gr. vj)  
Aque dest. .... 90.0 (ʒiij)

If the Monsel solution does not stop the hemorrhage, tannic acid will probably fail; but, more important, the two should not be used together, as they are incompatible and the tannate of iron will be formed, which is as black as ink.

—H. A. HARE in "Practical Therapeutics."

**Principles of Syphilis Therapy.**—E. v. DUHRING (Münch. med. Woch., Sept. 16, 1902) objects very much to the injudicious and indiscriminate use of mercury as recommended by the French school. The best treatment is the combination of the specific with the symptomatic method, where only moderate amounts of mercury are used, and great stress is laid upon hygienic measures. It should never be commenced before the cutaneous lesions are manifest, and hypodermic injections are to be preferred, since such patients are required frequently to consult the physician and are thus much better kept under control. The salicylate is the best preparation, and the injections should be given twice weekly, the dose being from 0.08 to 0.1 gram. Ten to 15 injections are sufficient as a rule, and one or two should be given after all symptoms have abated. Turkish baths may be taken the day before or the day after the injections, and lesions of the mucous membranes are best controlled with chromic acid, neutralized with bicarbonate of soda. The second month after the injections iodide of potassium is begun, in daily doses of half to one gram for about one month. If then no symptoms are left all treatment is stopped. The patient presents himself twice a month, and with the appearance of new symptoms the potash is again ordered in the same dose. If at the end of three months the patient is still free from symptoms half the dose of iodide is given nevertheless. The intervals are gradually increased, so that during the second and third years only one or two courses are prescribed.

**Fatal Abortion After Citric Acid.**—Citric acid is a stronger poison than tartaric acid, which in doses of one dram has caused the death of an adult in nine days, after uncontrollable vomiting. It has occasionally been employed to produce criminal abortion, and a case is reported by H. KORNFIELD (Fried. Bl. ger. Med., Vol. 53, No. 5), in which the result was fatal. The most prominent symptom here also was excessive emesis. On autopsy the stomach was found to contain a greenish acid fluid, and the mucous membrane was swollen and hyperemic.



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SATURDAY, NOVEMBER 1, 1902.

## THE NEW YORK STATE MEDICAL ASSOCIATION.

THE nineteenth annual session of the New York State Medical Association, held as usual in New York city, has been a repetition of the success of the meetings of recent years, with an addition to the numbers in attendance and a distinct progress in the practical and scientific value of the papers presented. The State Association has become one of the forces in the medical life of the commonwealth, and this year's annual meeting was an unmistakable index of that fact. The happily very favorable weather in a year that has been noted for mischances in this respect brought professional representatives from all parts of the State, and the varied program proved an attraction for good audiences at all sessions. There was an excellent balance of medical and surgical papers presented, and the number of invited guests from other States who contributed to the scientific work added greatly to the interest.

The symposia were especially seasonable and timely in their subjects. The symposium on "colds" brought out a number of practical hints on this universal ailment that make the report of it presented in this week's *MEDICAL NEWS* of special value to the practitioner. The series of papers on surgery of the gastro-intestinal tract,

to which Dr. Ochsner of Chicago and Dr. Wm. Mayo of Rochester, Minn., contributed articles on radical operations for gastric cancer constitutes what is practically another symposium, though not dignified with that name. The symposium on typhoid fever, a full account of which will be found in the Society Proceedings, brought out an excellent review of recent progress in the knowledge of typhoid, especially with regard to serum diagnosis and the interesting problems connected with the question of paratyphoid and paracolon infections. When we add that there were besides symposia on pneumonia and on the use of the Roentgen rays in medicine and surgery, some idea can be obtained of the eminent opportuneness of the subjects so happily chosen for discussion. The annual dinner introduced a novel feature. Instead of the usual after-dinner speeches, admittedly prone to be conventional and overpersonal, a special entertainment by professional talent was provided for the guests. Brander Matthews, in an article on postprandial oratory, said not long ago that it must ever be borne in mind that after-dinner speaking became popular about the time that negro minstrelsy began to decline. There is a tendency manifest of late years in many quarters to return to more deliberate methods in after-dinner entertainment, and the State Medical Association seems to have done well in permitting itself to be caught by the stream of tendency that makes for more hearty enjoyment on these occasions. Perhaps if a little more care had been exercised in the judicious elimination of some numbers of the program the novelty would have proved as agreeable as it can be made. The innovation is certainly in true humanitarian spirit and quite worthy of medical men, since no longer will it be necessary for professional brothers to sit for hours and curb their appetites while in the words of an experienced after-dinner orator—the sage of Roycroft—they keep their mental sphincters tightly pinched on ideas enough to occupy fifteen minutes or more, although these ideas are impatient to burst the bounds of the mental ampulla.

We understand that the committee on reunion of the State medical organizations made a report at the meeting that puts medical reconciliation a long step nearer to its eminently desirable consummation. The suggestion is formally made that the two present organizations shall merge under a new charter to be obtained from the legislature, which shall be drawn up on the lines of

the present charter of the New York State Medical Association, the new organization to which the charter is granted; however, to bear the name of The Medical Society of the State of New York, and the members of both the old medical bodies to be eligible for membership. This seems to be an excellent set of expedients for the furtherance of reunion without leaving any hard feelings. We congratulate the committee on reunion, and also the committee of arrangements on the success of the meeting.

#### BERLIN'S CURABLE CONSUMPTIVES.

THE erection at Beelitz, near Berlin, of an institution for the treatment of cases of incipient pulmonary tuberculosis is noteworthy and suggestive. Provision has been made already for the reception of two hundred male and one hundred female patients in a group of buildings designed and equipped for this special use. A sum approximating eight million marks has already been expended in this enterprise, and a very much larger outlay is contemplated.

The purpose of the authorities is plainly to make the Beelitz "lungenheilstätte" a model sanatorium. Not from motives of vainglory, but with a desire actually to cure its patients, is the institution to be thus perfectly equipped. As none but incipient cases will be admitted, the percentage of "cures" will probably be larger than ever has been recorded at any great hospital where this disease is treated.

What is peculiarly interesting and suggestive about Beelitz is the fact that it is not regarded as a charity, but as a profitable investment. We are all familiar with the very just view that every active life preserved by hospital care or by measures of preventive medicine represents a certain economic gain to the community. Nevertheless in our country this view does not often rise above the dignity of an academic principle. Hospitals are established and boards of health are instituted on other grounds—motives of charity, of duty, of civic pride, of self-preservation, prevail. Cities provide these institutions, or they are provided by individuals; in either case there is a sense of sacrifice, voluntary or involuntary.

The motive underlying the Beelitz sanatorium is purely economic. The funds are those of the "arbeiterversicherung"—the compulsory workmen's insurance system inaugurated some years ago in Prussia—and the authorities believe that Beelitz will in the end more than pay for

itself. It is to insure this result that no case will be admitted which is not regarded as curable.

It seems unfortunate that New York and other American cities have not made provision for the class of patients treated at Beelitz. For public education which will limit the spread of pulmonary tuberculosis, and for various hygienic measures which will contribute towards the same end, provision has been or surely will be made. The sufferer from advanced tuberculosis, incapacitated and helpless, is not forgotten, though not always wisely cared for. But the person who is neither well nor incapacitated, who, in the popular phrase is "threatened with consumption," is left almost wholly to his own resources. If he is poor and ignorant his future is dark, and even if he realizes his danger his prospects are not much better. Private charity rarely reaches him, and the city offers him nothing better than the hurried consultation and the too often wasted advice of the dispensary. For such a patient Beelitz is better than the dispensary, and it is to be hoped that our shrewd German friends will be able to prove that in the end the sanatorium is cheaper.

#### TUBERCULOUS CONTAGION—HUMAN AND ANIMAL.

THE sensation of this year's Congress for Tuberculosis, which has been holding its sessions during the past week in Berlin, like that of last year's session in London came in the shape of a paper from Prof. Koch on the relations of animal and human tuberculosis. The distinguished dean of the science of bacteriology reiterates the assertion that bovine tuberculosis is not contagious for human beings. If infected meat and milk were capable of producing tuberculosis in man, then it would be easy to trace many cases of infection transmitted by these means.

As it is, such evidence is scanty and at best doubtful. A certain number of cases of cutaneous tuberculosis occur among butchers, and it is claimed that these are due to contamination with tubercle bacilli from infected meat. Prof. Koch, however, is of the opinion that such cases of tuberculosis after injuries are no more frequent among butchers than among carpenters. Tubercle bacilli are often present on soiled hands, and the wound provides for them a ready avenue of entrance into the tissues.

Prof. Koch says that while the transmission of tuberculosis from animal to human tissues may not be impossible it is an extremely rare occur-



rence. If it were not so there would be a large number of reported cases of intestinal and generalized tuberculosis, while as a matter of fact these cases are very infrequent. Certainly meat containing tubercle bacilli is often eaten. If such infected meat is comparatively so harmless, then infected milk cannot be very dangerous. The mere boiling of milk does not destroy tubercle bacilli in it, yet tuberculous infections following its consumption are very seldom traceable. Infected milk and meat then are not the source of danger in this respect that they have been considered to be and the scare over them has diverted attention in some degree from the real sources of the distribution of the disease.

The real sources of the contagious materials, in Prof. Koch's estimation, are human beings affected by tuberculosis. The attention now given to the inspection of cattle should be diverted to the inspection of the dwellings of the poor and of the factories in which they work, to the erection of better dwellings in the tenement-house districts, and to the segregation of patients suffering from the disease. Tuberculosis is an infection, and its ravages can be prevented just as those of other contagious diseases have been. It is not a question of heredity, but of environment. The disease can, with properly directed efforts, be completely eradicated. There must be more insistence on the danger from infected human beings and less on the possibilities of transmission from cattle. Bovine tuberculosis and its limitation are at best economic problems, they should not be made sanitary issues.

Prof. Nocard of Alfort, just outside of Paris, the distinguished French authority on veterinary medicine, to whom the microbic problems of animal life are often referred by the Pasteur Institute, said that Prof. Koch's position is untenable in the light of the discoveries that have been made since the distinguished German bacteriologist made his startling announcement in London last year. Nocard said that animals are seldom infected by human tubercle bacilli, yet such infections have been traced. The successful inoculation of the tubercle bacilli of one kind of animal into another kind is not rare. The characteristic bacillus tuberculosis of each animal group has a special virulence. Bovine tuberculosis is more virulent than any of the others, and is liable to affect other animals rather easily. Its transmissibility to man is then at least very probable, and some undoubted cases of such pathological transference have been reported dur-

ing the past year as the result of observations stimulated by Koch's denial of its possibility.

The subject of the interinoculability of human and animal tuberculosis is thus opened up once more. Prof. Koch's position seems extreme, yet his insistence on the much more serious danger from human beings and the necessity for greater precautions in this regard is eminently conservative and in accord with our surest knowledge. That both sets of precautions, those against infected human beings, within proper bounds, and those against animal products, should be put in force is perfectly possible and even thoroughly advisable. It would certainly seem foolhardy at the present time and in the present state of our knowledge to diminish any of the surveillance of animal tuberculosis that has been so well organized with the expenditure of so much effort and influence. The question is as yet one for academic discussion, not for practical conclusions. When the best experts disagree we can only await the issue of further observation and experiments before formulating a definite opinion.

## ECHOES AND NEWS.

### NEW YORK.

**Color and Insanity.**—From the daily press we learn that the effects of color are being tried in the treatment of some insanities on Wards Island.

**Consulting Neurologist, Metropolitan Dispensary.**—Dr. T. D. Crothers of Hartford, Conn., has been elected consulting Neurologist by the Board of Trustees of the New York Metropolitan Hospital and Dispensary.

**Columbia University Medical School.**—Prof. James W. McLane, Dean of the Faculty of Medicine, in his report for the academic year 1901-02, about to be included for publication with those of President Butler and the deans of the other faculties, points out many needs and changes for the College of Physicians and Surgeons. Dr. McLane suggests, for one thing, that autopsy-instruction from a surgical standpoint be included in the curriculum at once. He mentions, as indicating the quality of the work of the school, that out of a graduating class of 145 last spring 101 received appointments in hospitals in this city and elsewhere, in every case the result of a competitive examination. In the hope of reducing the size of the entering class, the Committee on Curriculum has recommended that no conditional students be hereafter admitted. As a result of the limited accommodations in the laboratories six students were last year refused admittance. Next year the new entrance requirements take effect, the first step towards making the school postgraduate in character. Dr. McLane appeals for financial support in the maintenance of the technical library, invaluable both for instruction and research. Thirty-two colleges are represented in the entering class this year. Those having the largest representation are Columbia, Harvard, Yale, Princeton, New York City College, Lafayette and St. Francis Xavier. The other colleges include Williams, Rutgers, Wabash, Brown University, Wesleyan University, Holy Cross

College, Emory College, the Universities of Missouri, Alabama, Virginia, Leland Stanford, Junior, Boston, Colorado, Alfred, Brown, and Beloit and Amherst Colleges.

**The State Hospitals and Their Future.**—Too much publicity cannot, we believe, be given to Governor Odell's scheme to convert the New York State hospitals into a part of the machine sources of patronage. The Evening Post puts the case so well that we here quote in full from that newspaper a recent editorial expression: "The readers of the Evening Post are aware that we opposed to the extent of our ability the bill taking the control of the State hospitals for the insane away from the boards of local managers and putting them all under three persons, composing the State Commission in Lunacy. Our reasons for opposing this measure were twofold. We believed that local managers, serving without compensation and familiarizing themselves by frequent contact with the administrative officers and inmates, could perform the duties far better than three men, performing their duties and spending their time mostly at Albany. As there are eleven such hospitals and many thousands of inmates, it is manifestly impossible for three men, however industrious, to acquaint themselves personally with the facts necessary to a humane and efficient administration of those great institutions.

"In reply it was said that local boards of inspectors would be appointed to examine the institutions regularly and report their condition, from time to time, to the Commission at Albany. The obvious answer to this was that the inspectors would have no power to rectify any abuses that they might discover, or to carry into effect any reforms that they might deem needful. They could only report the abuse, if they found it; but the person committing it would claim the right to be heard, would take the case to Albany, and perhaps introduce witnesses; and so the three Commissioners never could get through their business at all in that way. Nothing short of eternity would suffice to hear all the cases that would come up if the inspectors did their duty.

"Another reason, and a more important one, for opposing this bill was that it would prepare the way for political management of those institutions, and make them eventually a part of the spoils system. We said that, however good Gov. Odell's intentions might be, he could not answer for his successors in office, that the mischief consisted in opening the door to partizan control. That door had been closed for good reasons, and it ought to remain closed forever. We cited the shocking condition that had prevailed in the State hospitals of Indiana as showing the inevitable consequences of admitting the spoils system to these institutions.

"Recent events in Illinois have given warning of the same general type. In that State both the Central Board of Charities and the local boards of the hospitals are political in their composition. Last spring a series of reports reached the columns of the press, detailing acts of cruelty and infamy, including the scalding of a patient to death, and also the fact that insane women patients had given birth to children. The Central Board was compelled reluctantly to make an investigation of one of those institutions. Its report was surprisingly similar in tone to those which are customarily issued from the War Department when any accusation of cruelty to natives is made against our army in the Philippines. The Board reported that women patients had given birth to children, owing to lack of protection, but that these occurrences were quite infrequent. It was discovered also that political assessments were levied on the employees of the hospitals, but that the payments were 'voluntary.' These things took place in Illinois. They have not taken place in

New York as yet, but they surely will if the door is left open to the admission of politics, and we have to remark here that the Republican State platform expressly approves the law which leaves this door open—a fact upon which we commented when the platform was adopted.

"At no time did we think it possible that a Governor of the State could ever have a connection, either as shareholder or as creditor, with a company furnishing supplies to those institutions. We do not now impugn Gov. Odell's motives in becoming a shareholder or a creditor of such a company, but we point out the fact that his example in this case, if generally followed, would be a menace to good government.

"Now what has been the result of the act passed by the last Legislature? It is too soon to pass a decisive judgment, but the fact appears to be that only one member of the State Commission in Lunacy gives his whole time to the care of these eleven great institutions, and that person is a practical politician. Of the other two members, one is a practising physician in New York city—a man of eminence in his profession, and of first-rate character, but who took the office with the understanding that he was not required to give more than two days per week to the duties of the office. The other is a lawyer of Buffalo—a man of like character and attainments with the medical member, but one who has the care and responsibilities of a large practice at home, to which he gives his personal attention. Therefore, in practice, these institutions are already under political control, but politics has not yet reached the superintendents, stewards and other minor positions. The reason alleged for making this great change was economy, but according to a statement in Charities, the publication of the Charity Organization Society, there has been no reduction of expenses since 1900. We are assured on good authority that there has been a marked decrease of the recovery rate during the past year."

## PHILADELPHIA.

**First Negro-nurse Class.**—The first commencement exercises of the special class comprising colored persons of the Philadelphia School for Nurses was held during the past week. There were 24 who had taken the short course given by this school.

**Dinner to Drs. Keen and Wood.**—A committee of prominent physicians of this city and Baltimore have arranged for a complimentary dinner to Drs. W. W. Keen and H. C. Wood in honor of their recent return from a long sojourn abroad. The dinner will be given at the Bellevue Hotel Nov. 6.

**Smallpox Increasing.**—For the week ending Oct. 25 there were reported 12 new cases of smallpox as compared with two cases the previous week. A physician in the northern section of the city was summoned before the Bureau of Health to explain his failure to report six cases under his care in one house. He candidly stated that he had erred in his diagnosis, and was advised to report at once any suspicious cases in the future. A resolution advising vaccination was adopted.

**Dr. Lorenz Expected to Hold Clinic in Philadelphia.**—Arrangements are being made for an orthopedic clinic to be held at the Jefferson Hospital by Dr. A. Lorenz of Vienna during the early part of November. The distinguished surgeon will operate in the clinic of Dr. H. A. Wilson, Clinical Professor of Orthopedic Surgery. It is said that one girl, twelve years old, who is to be operated upon has been waiting for the operation for six years. When she was six years old her parents sent her to Dr. Lorenz, who advised



that operation be deferred until she was twelve years of age.

**Training-school for Feeble-minded Flourishing.**—At the annual meeting of the contributors of the Pennsylvania Training-School for Feeble-minded Children, at Elwyn, Oct. 21, the Secretary's report showed the following: Number of inmates, 1,015; number of employees, 179. The property comprises 337 acres of land, with buildings valued at \$750,000, all free from indebtedness. The Treasurer's report showed a balance in the free fund amounting to \$117,422. Mr. Samuel A. Crozer was elected President.

**Improvements at Philadelphia Hospital Asked For.**—At a recent conference between the Councils' Committee and the Board of Charities and Corrections estimates for the Philadelphia Hospital for 1903 were considered. Among the improvements suggested are the erection of a \$150,000 operating-room, a \$50,000 pavilion for nervous diseases, an \$80,000 bacteriological and pathological museum, and a \$150,000 laboratory. The consumptive ward, for the erection of which \$80,000 was appropriated last year, but which was not built because the money was used for other purposes, was again discussed. In favoring the repetition of the appropriation it was stipulated that the money, if obtained, shall not be used for any other purpose. President Shoemaker is confident that the appropriation will be made. Dr. Lawrence Flick states that the Free Hospital for Poor Consumptives, to which Henry Phipps has recently given an additional \$6,000, will cooperate with the city in any way in caring for its consumptives.

**Gastroptosis.**—In discussing this subject Dr. Alfred Stengel said that gastroptosis occurred in a large percentage of women, but not all produced symptoms. In both sexes the condition depends largely on physical conformation, it being frequent in persons having long, narrow chests. The wearing of belts by young men often causes gastroptosis by pressing down the intestines. Regarding the relation of gastroptosis to neurasthenia, Dr. Stengel thinks that it is capable of producing the latter affection, being one of the organic bases of that condition. The modes of examination of the stomach were discussed. When the stomach is filled the pylorus rises, as can be demonstrated post-mortem, but it does not rise so much when filled with air as when it contains food. This fact will cause the examiner to be deceived if allowance be not made for the difference. Before operation is undertaken for the relief of gastroptosis be sure that it is causing the symptoms present. Gastroptosis per se is capable of producing the so-called Dietel's crisis when hepatoptosis or nephroptosis is not present.

**Myocarditis with Especial Reference to Changes in the Elastica.**—At the meeting of the Pathological Society, Oct. 23, Dr. W. M. L. Coplin reported a series of studies on the above subject. The most important changes, given in detail, were those found in the heart of a man of fifty-nine years, who had suffered during several years from attacks of angina, and who died suddenly during one of these attacks. The changes found were almost a typical instance of what Letulle describes as elastic sclerosis. There was some increase in the skeletal elastica and a marked increase in that of the blood-vessels. The most marked change was found in the subendocardial elastica, which in some areas showed as many as 12 layers. In most areas, however, the elastica was not arranged in layers, but as an irregularly woven network of large, coarse fibers having a flattened appearance. The muscle-columns and papillary muscles were practically nothing but elastica. A clinical point mentioned in this connection was that a heart undergoing such change is probably in better

shape to maintain its work than is one in which the change has been largely into collagenous tissue. The heart in question had maintained its function fairly well in spite of the marked sclerosis of the left ventricle.

**Pressure in the Bile-ducts in Floating Liver.**—In a paper on this subject read before the Philadelphia County Medical Society Dr. J. D. Steele said that two varieties of hepatoptosis must be considered: (1) Total, where the posterior edge of the liver remains firmly anchored, the remainder of the organ prolapsing as if the suspensory ligaments were cut, the condition really depending on the failure of these ligaments to support the organ; (2) anteversion, where the anterior edge of the organ drops and the posterior rises. Two experiments regarding the pressure in the bile-ducts were made on cadavers, in one of which there was a floating liver, while in the other the organ was in a normal condition. The technic of passing fluid from the gall-bladder through the duct and estimating the pressure necessary while the liver was held in the various positions assumed by the floating organ was described. The experiments showed that the pressure necessary to cause the flow of fluid through the duct was from three to three and one-half times as great when the edge of the liver was at the level of the umbilicus as when the organ was in its normal position. The pressure was also found to vary directly as the dropping of the anterior border varied. It is thought that attacks of colic-like pain simulating that of gall-stones may be caused by the sudden obstruction occasioned by the change in position of the floating liver.

**Consumptive Poor Hospital.**—Through the philanthropy of Henry Phipps, a New York man, but a native Pennsylvanian, Philadelphia is to have a clinic for the treatment of poor consumptives. Mr. Phipps is very much interested in charitable work of any kind, and when he heard, through Dr. Lawrence F. Flick, President of the Free Hospital for Poor Consumptives, that Philadelphia was in need of a clinic he immediately gave \$5,000 for the purpose of securing suitable quarters for a clinic, and said he would give enough money every year to support the institution. The Free Hospital for Poor Consumptives, which has the plans for the clinic in charge, has accepted the offer of Mr. Phipps and has already taken steps to secure quarters for the officers and dispensary of the clinic. While the exact site of the building has not yet been made known, it is understood that it will be in some district populated mostly by the poorer classes. Mr. Phipps stated to the society in charge of the work that he will give more money if it is necessary. The cost of the maintenance of such a clinic will be from \$3,000 to \$4,000 a year, all of which Mr. Phipps has promised to pay. He has long been identified with charitable work, and a few months ago gave \$100,000 for the aid of the widows of the Boers. He has also before given several thousand dollars to the Free Hospital for Poor Consumptives which is in operation at White Haven.

**Pyloric Carcinoma Simulating Gastrocolic Fistula.**—Dr. D. L. Edsall reported this case. The patient was a man of fifty-nine, in whom the most striking symptom was fecal vomiting. A careful search of medical literature reveals practically nothing concerning this symptom in gastric cancer. The man was first seen two and one-half years ago in consultation. At that time he had severe gastric symptoms, vomiting, pain, emaciation and prostration. Gastric cancer was suspected, but the patient suddenly became better and remained entirely well for two years. Another attack similar to the first then came on—vomiting, pain, rapid emaciation (70 pounds lost in two months), and finally fecal vomiting. There were no physical signs referable

to the stomach except a slight dilatation of that organ and slight epigastric tenderness. The colon was inflated with air and the patient belched some quantity. This was afterwards shown to have been entirely accidental at that time. Nutritive enemata of milk and eggs were given, and the vomited material was found to contain as much as  $4\frac{1}{2}$  per cent. of fat, indol, skatol, and intestinal organisms. For these reasons a fistula was supposed to be present. Death soon ensued, and autopsy revealed a carcinoma of the pylorus and lesser curvature of the stomach, there being no sign of other lesions of the intestinal tract. The fecal vomiting is probably to be explained by the presence of a dense ring of cancerous tissue around the pylorus, which did not cause obstruction but prevented contraction, thus allowing the vomiting of material that could hardly have come from anything but the enemata given.

**Again the Philadelphia Almshouse.**—The Press has been during the past few days printing much regarding the state of affairs at the Almshouse and Philadelphia Hospital. Started by the fact that the chief resident physician of the institution, Dr. Daniel E. Hughes, is at the point of death from tuberculous peritonitis, due in all probability to the unsanitary arrangements of the place, the reports have become, as usual, overdrawn. Statements are made such as that "in that community 6,000 souls, men and women, are herded as cattle in transit," and that "the abnormal death-rate is so high that it has increased the mortality of all Philadelphia." "Funds," it is said, "are lacking, not only to keep the living from dying but actually to bury victims after their premature deaths." These are not sober second thoughts. But conditions are bad enough, as proven by statements of visiting chiefs, particularly in the neurological department. Dr. Charles K. Mills, for over 25 years on the staff of the hospitals, is quoted as saying that "under the existing conditions outdoor occupation and recreation are practically impossible. The only effort that can be made to give these is through a doleful procession of those who can be trusted to walk out under proper guardianship." A report to the President of the board, made by the six visiting neurologists of the institution in March, 1902, has been unearthed at the City Hall, where it has since that time lain. This report recommends a building, on the corridor-pavilion plan, special wards, infirmaries for both sexes, wards for the tuberculous, laboratories, etc. "Apathy resulting from ignorance" is given as the cause for the existing state of affairs. Councils are looked to for relief. Dr. Hughes has just died.

#### CHICAGO.

**Clinics at the Northwestern University Medical School.**—As a part of the special exercises connected with the installation of President James of Northwestern University Dr. Norman Bridge gave a medical clinic on typhoid fever, exhibiting eight cases, the majority of them convalescing from the disease. Dr. Adolph Lorenz of Vienna, Austria, reduced four dislocations of the hip-joint and operated on a case of torticollis. Dr. Robert T. Morris of New York gave a surgical clinic. He operated on a case of acute progressive appendicitis and on a case of intestinal fistula.

**Nurses for the Presbyterian Hospital.**—It is said that the Illinois Training-School for Nurses will terminate its connection with the Presbyterian Hospital at the expiration of its present contract, Nov. 1, 1903. In a letter to the Executive Board of the hospital the managers of the school say: "At the expiration of our last contract, Oct. 1, 1901, it was with considerable reluctance that we entered into another, as we had found it impossible the preceding year to furnish the requisite

number of nurses without calling in graduates, thus not only increasing our expenses, but reducing our income from special nursing. We had hoped that this demand would lessen and that we might continue to serve you another three years, but this we now find impossible. In closing our connection with the Presbyterian Hospital, we do so with since regret, and with the most cordial feelings towards the trustees and all those connected with its management."

**Impure Milk.**—Many samples of milk below grade have been found by the milk inspectors. This is largely due to the fact that their labors have been directed to the poorer districts. The City Department of Health has resumed the publication of the names and addresses of dealers who sell skimmed milk as whole milk, and it rests with the consumers to punish these by refusing to further patronize them. The dirty milkman is even more dangerous than the dishonest one, and the war against dealers whose facilities and depots indicate that they cannot handle milk properly will be waged with more severity than heretofore. Several samples of milk have been found adulterated with formalin, for which there is even less excuse than in hot weather. Suits have been commenced against the offenders, and it is to be hoped that they will be pushed vigorously.

**Fraudulent Medicine Concerns.**—A crusade has been undertaken against these concerns, and on Oct. 17 detectives raided a building on Michigan Avenue and confiscated a large quantity of literature of the "Chicago Cure Company."

**Polluted Water.**—Three scientists—a chemist, a bacteriologist and a pathologist—sustain every contention made by the City Department of Health in relation to the water-supply of the public schools, and the danger to the pupils in its use. They have reported the result of tests that they made of the water as a board of experts selected by the Board of Education for the purpose: "We would emphasize the fact that when water is furnished the common drinking-cup remains a constant source of danger, from which probably more is to be feared than from the possibility of typhoid infection." Faucets in the public school buildings will be kept closed until the Health Department reports that the supply from the Lake is comparatively free from danger as a drink, if the recommendation of the Committee on Buildings and Grounds is adopted by the board at its next meeting.

**Releases in Injury Cases.**—The United States Circuit Court of Appeals, Eighth Circuit, in Chicago and Northwestern Railway Company versus Wilcox, a personal injury case brought by the latter party, says that in the absence of fraud and mistake an agreement of settlement and release of an unliquidated or disputed claim as conclusively debars the parties from reviving and litigating it as a final judgment. Such agreements of compromise are uniformly favored and upheld by the court. A mere preponderance of testimony is insufficient to establish such fraud or mistake as will warrant the avoidance of a written agreement of settlement and release. The proof must be clear, unequivocal and convincing to have this effect. A mistake of a past or present fact may warrant a rescission of a contract of settlement and release. But a mistake in opinion or belief relative to the future duration or effect of a personal injury, or a mistake in prophesy or opinion as to an uncertain future event, is not a mistake of fact, and is no ground for the avoidance of a release or of a contract of settlement. The complainant in this case, who was sixty-five years of age when injured, compromised and released a claim for a broken hip. She knew when she settled that her hip had been broken; that it was a bad break; that the neck of the femur was frac-



tured. She was led by the statement of her own physician, who was also the company's physician, to believe that she would be well within a year, and she settled on that basis. She was mistaken, and her injury and disability turned out to be permanent. The court holds that her mistake was not a mistake of fact, but a mistake in opinion or belief as to a future event, and that it furnished no ground for an avoidance of her release. Again, it says that it is common knowledge, with which all must be charged, that the future effects of a broken bone are uncertain, contingent on many conditions, and unknowable. The physical and mental condition of the sufferer, the state of his vital organs, his age, his habits of life, the character and temperament of his nervous system, and many other conditions that it is impossible to enumerate or even to conceive, inevitably affect the duration and the character of his disability and the amount of his suffering. Ignorance of the duration of the disabilities and of the ultimate effects of the injuries always exists where compromises are made before a complete recovery is effected. The cases are doubtless rare where the duration of the disability corresponds with the prophecy of the physician or with the belief of the parties when settlements are made. But compromises and releases are not voidable on this account, for the reason that the parties to them know the uncertainty of these future events, and by the very fact of settlement before they develop agree to take the chances of their effects. Their mistakes relative to the future duration of the disabilities and the future effects of the personal injuries that form the subjects of their contracts are mistakes of belief and not of fact, and form no basis for the avoidance of their contracts. Such was the mistake under which the complainant in this case labored. It was a mistake in the opinion of the doctor and in the belief of his patient with reference to unknowable future events, and presented no ground for a rescission of her release.

**Bulletin of the Health Department, Week Ending Oct. 25, 1902.**—Diphtheria threatens to be more prevalent and fatal this fall than at any time since its treatment by antitoxin was begun in Chicago some seven years ago. Twenty deaths were reported from this cause last week, as against 12 for the corresponding week last year, and this two-thirds increase in the number of deaths is made more significant by the increasing frequency with which the diphtheria bacillus is found in the daily laboratory examinations—an increase amounting to more than 55 per cent. during the last two weeks.

#### GENERAL.

**Vienna Poliklinik Favored.**—It has been known for some time that Baron Nathaniel Rothschild had intended to assist the Poliklinik Hospital here. On Friday morning the hospital authorities received notice that he had placed 1,000,000 kroner (\$200,000) at their disposal. Archduke Rainer assisted in the elaboration of the stipulations, which are few, nearly everything being left to the discretion of the hospital managers. The capital remains untouched, only the annual interest being used; but should circumstances necessitating it arise in future the capital is then placed at their unhindered disposal. The hospital contains 140 beds. The inmates pay a small sum daily, but this rule is not always enforced. It is subsidized by the municipality, but there has been a yearly deficit. This donation places its funds on an assured basis.

**Mississippi Valley Medical Association.**—The twenty-eighth annual meeting of the Mississippi Valley Medical Association was held in Kansas City, Oct. 15, 16 and 17. The following officers were

elected for the ensuing year: President, Edwin Walker, M.D., Evansville, Ind.; First Vice-President, Hugh T. Patrick, M.D., Chicago, Ill.; Second Vice-President, Wm. Britt Burns, M.D., Memphis, Tenn.; Secretary, Henry Enos Tuley, M.D. (re-elected), Louisville, Ky.; Treasurer, Thos. Hunt Stuckey, M.D. (re-elected), Louisville, Ky. Next place of meeting, Memphis, Tenn., Oct. 7, 8 and 9, 1903.

**Walking Tours.**—Walking is an art almost said one of the lost arts, says *Country Life in America*. It is astonishing how few know how to walk; know how to acquire the measured stride, the springy step, the easy poise of the body and the swing of the arms, which make walking at once one of the most healthful and enjoyable forms of physical exercise. For the real pleasure of walking one must turn to the country. Pavements are but dead, unyielding matter at best. In the turf of the country there is a spring in response to the pressure of the foot which is a delight and an inspiration in itself. The purity of the air sets the blood to racing gloriously. Good walkers find 30 miles a day a comfortable average, allowing plenty of time for rest and "loafing." Two weeks thus spent will afford memories to last for all time, and with them a measure of health and strength, a quickening of vital forces, a nervous energy which will find expression in increased power for accomplishment in the world's work.

**Serum of Whooping-cough.**—A young Brussels physician named Leureaux announces he has discovered the serum of whooping-cough, says the Sun. From the experiments which he has conducted hitherto the injection appears to be quite harmless. The first effects are apparent about forty-eight hours after the inoculation. The serum produces an early cessation of the coughing fits and a considerable diminution of the normal period of illness. If the injection is made immediately on the manifestation of the usual symptoms, the malady can be cured in eight or ten days. The usual course is from six to eight weeks.

**Insurance Against Surgical Operations.**—A movement has been started in Great Britain to provide insurance against surgical operations. Some such scheme is thought to be the only way of securing the independence of the working classes while physically incapacitated. The plan as outlined by a foreign expert is described as follows: "For a certain annual payment a subscriber might be entitled to (1) a sum down, or (2) free admittance to a nursing home and a free operation. The expense of illness, more especially of illness including an operation, is now so great that we see no possibility of effective provision for it on the part of people of moderate incomes except by some such scheme. The cost per week of two trained nurses alone—exclusive of medical attendance, the increased household expenses, and the change of air always desirable in the convalescent stage—would absorb the whole income of many professional and middle-class persons, who consequently have far less efficient care in illness than is available for the working classes."

**Changes in the Medical Corps of the Navy, Week of Oct. 25, 1902.**—Surgeon E. H. Marsteller, ordered to Newark, N. J., for duty in connection with recruiting. Passed Assistant Surgeon W. L. Bell, commissioned passed assistant surgeon, with rank of lieutenant (junior grade), from Nov. 16, 1901. Passed Assistant Surgeon M. W. Garton, detached from the "Columbia" and ordered to the naval hospital, Yokohama, Japan, sailing from San Francisco, Cal.,

Nov. 7, 1902. Passed Assistant Surgeon M. K. Johnson, ordered to the Naval Academy. Assistant Surgeon J. S. Taylor, detached from the naval hospital Yokohama, Japan, and ordered home and to wait orders. Assistant Surgeon R. A. Bachmann, detached from the Naval Academy and ordered to the Naval Museum of Hygiene and Medical School, Washington, D. C., Oct. 31. Assistant Surgeon J. H. Holloway, detached from the naval hospital, Chelsea, Mass., and ordered to duty at the Museum of Hygiene and Medical School, Washington, D. C. Assistant Surgeon R. E. Hoyt, detached from the Naval Academy, and ordered to the Museum of Hygiene and Medical School, Washington, D. C., on Oct. 31. Assistant Surgeons R. H. Michels, J. L. Neilson, ordered to the Museum of Hygiene and Medical School, Washington, D. C., on Oct. 31. Acting Assistant Surgeons H. Shaw, B. F. Jenness, ordered to the Museum of Hygiene and Medical School, Washington, D. C., Oct. 31.

Orders issued by Commander-in-Chief of Asiatic Station. Surgeon J. E. Gardner, detached from the naval hospital, Yokohama, Japan, and ordered to the "Kentucky." Surgeon G. P. Lumsden, ordered to the "New York." Passed Assistant Surgeon M. S. Elliott, detached from the "Kentucky" and ordered to the "New York." Assistant Surgeon F. A. Asserson, detached from the "New York" and ordered to the "Kentucky." Assistant Surgeon W. E. High, detached from the "Glacier" and ordered home. Assistant Surgeon J. F. Murphy, detached from the naval station, Cavite, P. I., and ordered home.

**The Berlin Tuberculosis Congress.**—Great interest is felt throughout Europe in the first meeting of the International Tuberculosis Congress at Berlin last week. Astonishing progress is already recorded in conquering the deadliest malady of the human race. Thus, the English delegate reported that the death-rate in the United Kingdom in 1898 from consumption was 38 per 1,000. This has been reduced to 13, or more than 60 per cent. The delegates to the congress visited the great public sanatoriums in the pine forests, an hour's ride from Berlin. They found there not only the finest modern equipment for the cure of the disease, but what Prof. Brouardel of Paris described as an entirely novel and momentous experiment in the realm of social policy. These great institutions provide every accommodation at public expense to working-class victims of this scourge. The delegates were very much impressed and the English representative declared his intention to induce a deputation of English workmen's friendly societies to visit the sanatoriums. We print elsewhere an editorial comment on this aspect of the tuberculosis question. Germany is represented by Professors Koch, von Leyden and Fraenkel; France, by Professors Brouardel, Calmette and Nocard; Austria, by Professors von Schrotter and von Du-bray; the United States, by Drs. Denison and Eager, and Great Britain, by Drs. Lillier and Theodore Williams. Count von Posadowsky-Wehner, Secretary of the Imperial Home Office, opened the conference. Papers were read reporting the progress of the work of suppressing consumption. There was also a scientific exposition, showing models of sanatoriums and improved appliances. Dr. Kayserling showed a series of pictures demonstrating the tuberculosis tendency of persons connected with art. He instanced the case of Simonetta Catania, who served as the model for Botticelli's famous "Venus," in the Berlin National Gallery. She died of consumption at

the age of twenty-four. Dr. Kayserling argued that the whole Botticelli school was strongly influenced by tuberculosis. The papers read were essentially practical reports of work done. Prof. Fraenkel reviewed the development of the struggle against tuberculosis up to the time of the establishment of the International Central Committee. He said the critical struggle against tuberculosis really began with Prof. Koch's discovery of the bacillus of the disease, but even yet the subject is not fully understood. In Germany, under Prof. von Leyden's influence and direction, a system of sanatoriums had arisen for the working classes and associations had been formed. They were convinced that the patient expectorated infection, and that the closer people lived together the greater the danger of infection. Tuberculosis was a great social question. There was no doubt it was a specific infection. The strongest man might be infected. Great Britain had started the idea of hospitals for consumptives with splendid success. At the congresses held at Paris, Naples and London the idea of an international association arose, and the German Central Committee had undertaken its organization. Prof. Brouardel said that France has now twenty-five popular sanatoriums, the first object being the isolation of those afflicted with the disease. Thanks to public and private generosity, special establishments would be erected. The system of sanatoriums had entered upon a new era and every sign of progress is visible. M. Waldeck-Rousseau, when Prime Minister, had appointed a commission to inquire as to the best prophylactic measures against the disease. Mr. Hillier, on behalf of the English association, submitted four measures for the prevention of the prevention of the spread of tuberculosis. First, the prohibition of expectoration under penalties; second, systematic notification of phthisis; third, efficient ventilation and lighting in all factories and public and private buildings, and fourth the establishment of sanatoriums for tuberculous cases in early and advanced stages, and for the treatment of phthisical cases. The Belgian and Swedish delegates advocated compulsory notification of cases of phthisis. Prof. Koch reiterated his statement regarding the non-contagious character of animal tuberculosis. This is treated elsewhere in this issue.

**Psychology for Teachers.**—With the intention of making psychology as understood by instructors of youth at once more useful, more scientific and more intelligible, the following course is offered to the teachers of Boston and vicinity. Dr. George V. N. Dearborn, Professor of Physiology in Tufts College, will provide a series of laboratory exercises on the physiology of the nervous system, with the general intent of showing the relations of the mind and the body, and meaning to point out by laboratory methods the so-called "physical basis" of the mental process. Without a general knowledge of these bodily structures and functions, any one's notion of psychology, however profound else, is bound to be unscientific and, because founded in speculation, unsatisfactory, while to know more of the relations of body and mind is to the better understand children and youth both as recipients and as agents. A leading purpose of this course, then, will be to make its students more familiar with the common nature of the individual so far as the relations of mind and body can elucidate the matter. A second object such a course will serve comes through the acquaintance it will bring about with the most recent methods of experimental biological science, thus supporting di-



rectly one of the ideas of leading educators for raising the standard of the teaching profession. But more important than these, possibly, to the average teacher desirous of keeping up with the spirit of the times in pedagogy, would be the enlarged view and the general training in attention to technical detail which the course would inculcate. The work on these accounts will be helpful not only to those particularly interested in psychology, physiology or zoology, but it would be useful also to anyone competent to undertake it who cares for practice in the rudiments of the prevailing modern scientific method, of starting, namely, on a problem with the simple and advancing inductively to the complex. In this case there will be an opportunity for the application of this method to one of the large and interesting problems of human nature. It will be the instructor's aim to adapt the work to the actual needs of those who do it, be they quite unfamiliar with laboratories or competent experimenters. Without attempting to announce the details of the twenty exercises of the course, the general nature of the work may be foreseen from the rough outline following: After one or two introductory lectures on the basal principles of psychology from the physiologic viewpoint, the class will examine the nervous systems of several types of animals of different complexities for the purpose partly of learning how parallel is the intricacy of the life of any species with that of its nervous system. Next, study of the minute structures of nerve tissue will be undertaken with the aid of the compound microscope. The neurone, or neural unit, will here receive special attention from the psychological standpoint. The succeeding exercises will be employed in careful technical experiments on the actual functions of the nervous system as well exemplified in frogs, which, although dead, retain in their quite insensible tissues functional vitality long enough for this purpose. The remaining periods of the course will discuss such psycho-physical topics as emotion, temperament, habit, pleasure and pain, and some brief suggestion of the nature of mental fatigue and exhaustion. The course will consist, probably, of twenty exercises each about two hours long, held between nine and eleven on successive Saturday forenoons, beginning November 29, or at such other times as might better suit the students concerned. The finely arranged and equipped Laboratory of Physiology of the Tufts College Medical School will be utilized for this course; it is situated at the corner of Huntington and Rogers avenues, two blocks south of Massachusetts avenue. The fee for the course will be twenty dollars. As the number of students must necessarily be small, early application is advisable.

**Obituary.**—Dr. Frank E. Martindale, an old and well-known physician, died last week at his home in Hatfield Place, Port Richmond, S. I., after a long illness, aged seventy-two years. Dr. Martindale had resided in the Borough of Richmond for many years, and at one time had an extensive practice. He was once Health Officer of Port Richmond. He is survived by three daughters.

William Young, M.D., aged eighty-two, died last week at Cold Spring-on-the-Hudson of heart disease. He was the last surviving charter member of the Academy of Medicine of New York, and was well known among the older physicians of New York County. Dr. Young was born in Cortlandone, Ireland, in 1820, and his family came to this country in 1822. In 1842 he returned to Scotland for his

higher education, was graduated from the University of Glasgow, and then studied medicine in Dublin University and in Vienna. For a time after coming back to the United States, Dr. Young practised in New York city, but eventually went to Cold Spring, where his family had first settled.

## CORRESPONDENCE.

### OUR LONDON LETTER.

(From Our Special Correspondent.)

LONDON, October 18.

**A HIDDEN TRAGEDY—THE HEALTH OF THE KING—THE QUEEN AND HER PHYSICIAN—"DISCRETION" THE BETTER PART OF A COURT DOCTOR.**

THE death of Dr. Arthur Barry Blacker, announced in our medical journals a week or two ago, though of little significance to the uninitiated, was to those behind the scenes the last act of a tragedy which has hitherto been successfully hidden from the public. Dr. Blacker, who was just forty years of age, was one of the pioneers of the light-treatment in this country, and had for the last year or two held the post of Superintendent of the X-ray department in St. Thomas's Hospital. During the past year he had the singular good fortune, as it seemed, to be called in to minister to the King. This was before the abdominal crisis, which in June so nearly turned the intended coronation ceremony to a royal funeral. In previous letters reference has been made to the widespread rumor that His Majesty was the subject of cancer. He was said, on the best back-stairs authority, to be suffering from an affection of the throat similar to that which proved fatal to his imperial brother-in-law, the late Emperor Frederick of Germany, and to his own brother, the late Duke of Saxe-Coburg. This rumor grew into so solid a belief in the public mind that the court officials thought well to issue a formal denial. At the time of the operation the rumor again revived, but the seat of disease was shifted from the larynx to the intestine.

It was whispered everywhere, at dinner-tables, in clubs and other places where members of Parliament most do congregate, and even within the precincts of Buckingham Palace itself, that the alleged appendicitis was a diplomatic formula for cancer. The public—and in that term I include not merely what Tennyson called the "many-headed beast," but those whose position gives them opportunities of knowing the truth at first-hand—had so firmly made up its mind that King Edward was suffering from cancer, that another official denial was judged to be necessary. The medical journals were "authorized to state" that there was no sign or suspicion of cancer in any part of the royal person. There was not, so far as I know, any reason to doubt the perfect accuracy of this statement at the time it was made. But official statements, even if they tell the truth, seldom, if ever, tell the whole truth. I am in a position to say—and this is the first time within my knowledge that the fact has been published—that the suspicion which has existed in the public mind almost since the time the King came to the throne had a solid foundation, though the superstructure was purely fanciful. The King had a small rodent ulcer near the root of the nose, which was successfully dealt with by the X-ray treatment. This was applied by Dr. Blacker, who owed to his obscurity the honor of being chosen for the purpose. In such matters King Edward places his trust in Hebrew counselors, who brook no rival near the throne, if they can keep him away from it. Dr. Blacker cured the King in sixteen sittings. How long the cure will last remains to be seen, but at present

it is complete. By a strange and sad irony of fate the physician himself fell a victim to cancer in the very moment of his success. He was attacked by epithelioma of the axilla. Amputation at the shoulder-joint was thought of, but the disease spread so rapidly that the idea of surgical intervention had to be abandoned. The end came on September 10, when the man whose skill had saved the King from a fate far more dreadful than appendicitis, passed away unwept and unhonored by those to whom he had rendered such signal service.

The Wise Man said with truth, "Put not thy trust in princes." A remarkable instance of the fickleness of court favor is afforded by the treatment meted out to Sir William Broadbent, who is not only the most eminent physician in this country, but the official head of the medical staff which has the care of the royal health. During the King's illness Sir William Broadbent's name was conspicuous only by its absence from the bulletins. The fact excited much comment at the time, all the more since Sir Thomas Barlow is a much younger man, with no special experience in the kind of disease with which he had to deal. The truth appears to be that Sir William Broadbent is out of favor because he acted like an honest man and spoke his mind. Radcliffe got into disgrace with Queen Anne because he said she had nothing the matter with her but the vapors. Sir William Broadbent incurred the displeasure of the present Queen through having had the audacity to diagnose smallpox in her sacred person. This was in the early days of the recent epidemic, and Sir William Broadbent insisted that the royal household should be revaccinated. Her Majesty took the diagnosis and the precautions recommended extremely ill, speaking of herself sarcastically as a leper, and doing all she could to discredit the physician. The royal family resent anything that tends to bring them down to the level of ordinary humanity. Hence they prefer doctors who, like Sir Francis Laking, are "discreet;" that is to say, who shut their eyes to ugly facts and are always ready to prophesy smooth things. Sir Francis Laking reminds me of the French courtier who read something to the Grand Monarque about "the late King of Spain." When his august master asked indignantly what that expression meant, he with delicate diplomacy answered: "*Sire, c'est un titre qu'ils prennent.*"

It was "discretion" that brought the King to the brink of the grave, from which he was saved only by the boldness of a surgeon who insisted on treating his Majesty as a man fashioned of clay like other men.

Sir Frederick Treves had great difficulties to overcome before he was allowed to have his way. The Queen—who, be it whispered, is not a person of the highest intelligence—obstinately opposed the operation, and if Sir Frederick Treves had been a man of less masterful personality she would now, in all probability, be a widow. When the real state of the case was explained to the King he at once placed himself in the hands of the surgeons, but they had a good deal of difficulty in the after-treatment; owing to his lack of self-restraint in such matters as coughing, etc. His hatred of anything that smacks of humanity in connection with himself was oddly displayed in his editing the bulletins and other announcements issued about his progress to recovery. Thus he expressed a great objection to the word "discharge," and would never allow it to appear in any of these statements.

A curious commentary on this royal weakness is supplied by the fact that the Queen was so suspicious in regard to the operation that she insisted on the contents of the abscess being brought to her for inspection—with the result that the windows of her apartments had to be kept open for some time afterwards. Falstaff speaks of "this foolish compounded clay, man;"

surely the height of foolishness is reached in that particular variety of clay which bears the stamp of a crown.

## SOCIETY PROCEEDINGS.

### NEW YORK STATE MEDICAL ASSOCIATION.

Nineteenth Annual Session, Held Oct. 20, 21, 22 and 23, 1902, in the New York Academy of Medicine.

#### FIRST DAY—OCTOBER 20.

At the business meeting of the first day the following officers were elected for the coming year: President, Frederick Holme Wiggin of New York; Vice-President, W. H. Thornton of Buffalo; Secretary, Guy D. Lombard of New York; Treasurer, E. H. Squibb of Brooklyn; Chairman Committee of Arrangements, S. A. Brown of New York; Chairman Committee on Legislation, E. Eliot Harris of New York; Chairman Committee on Public Health, J. Scott Wood of Brooklyn; Chairman Committee on Publication, Emil Mayer of New York; Chairman Committee on Nominations, Charles E. Quimby of New York; Chairman Committee on Library, John Shady of New York; Delegates to A. M. A., two years, Joseph D. Bryant of New York, Charles Lester of Seneca Falls; Alternates, Parker Syms of New York, L. D. Farnham of Binghamton.

#### SECOND DAY—OCTOBER 21.

**Pathogenesis of Eclampsia.**—Dr. Frederick P. Hammond made a plea for the more systematic observation and treatment of patients during pregnancy. The affection is undoubtedly due to an accumulation of urinary toxins in the blood. The best index of this accumulation is the presence of albumin in the urine. All the investigators of the disease are agreed on this point, though it is not the albumin itself that produces the convulsive seizure, but some failure of renal elimination. When the urine becomes of deep color, with a specific gravity of 1.012 or less, it is time to suspect the onset of eclampsia. Very often the first preliminary symptom is a lancinating headache, sometimes accompanied by vertigo and disturbances of vision. If patients sometimes suffer from headache, yet show no other signs of the onset of eclampsia, then any change in the character of the headache should at once be considered suspicious. Patients should be advised to consult their physicians at once. Great care must be taken in these cases in the use of coal-tar products for lessening the headache. These substances have a tendency to destroy red blood-cells, and this adds to the patient's condition and gives rise to an amount of waste material that may fail to be eliminated by the kidneys.

**Treatment During Pregnancy.**—There are many symptoms apt to develop during pregnancy which resemble neurasthenia. For this the most important treatment is the proper selection of diet, outdoor air and improvement of the general health. In the morning the woman should eat freely of cereals with some fruit, but should avoid the use of meat. Red meats should be allowed only at dinner, and not even then if there are any psychical or nervous symptoms. It is from red meats that most of the extractive excitant material originates. For red meat, chicken or fish or eggs may be substituted. There should be open-air exercise every day. If necessary a definite hour should be appointed at which the woman will take this outdoor exercise. Pregnant women should be advised against the use of cold baths, as these are apt to produce kidney irritation by throwing more material than usual on the kidneys for elimination. During pregnancy, constipation is for many women a regular habit. This should be cor-



rected, and various methods employed according to the indications. For those who suffer from heartburn and flatulence salts are the best remedy. For those liable to accumulations of fecal material in the colon cascara is the best remedy. It must be remembered that during an attack of eclampsia the patient is extremely liable to explosive reflexes. She has been compared to the strychninized frog. All external sources of irritation should then be removed as far as possible, and all manipulations should be done quietly and gently. Veratrum viride only paralyzes the muscles and in this way lessens the convulsions, so that it does not seem to be of special benefit, and it is prone to make labor more prolonged.

**Bacterial Flora of the Vagina and Cervix.**—Dr. William E. Swan of Saratoga Springs reviewed the literature of this subject since Döderlein's discovery in 1892 of the vaginal bacillus. Döderlein considered that this exerts a special protective function. This idea has been confirmed by others, but there are also other protective agents. Among these are the tissue fluids and leucocytes which act as phagocytes. Streptococci occur very commonly in the vagina, but usually they are not virulent. When injuries of the vaginal tract occur with consequent suppuration, the streptococci may assume a virulence they did not have. There is therefore great necessity for the exercise of care in order to avoid injuries of the genital tract. The presence of the colon bacillus in the vagina shows the necessity for the greatest cleanliness, because of the close proximity of the anus.

**Soil and Bacillus.**—Dr. Higgins said that there are two factors in infections of the vagina. These are the soil and the bacillus. As a rule the resistive vitality of the vaginal mucous membrane is quite sufficient to protect it against microbic invasions. The colon bacillus in particular possesses none of its pathogenic qualities when present in this region. Any disturbance of the tissues, however, lowers vitality. No force should be used in cleansing the vagina. Dr. Higgins has seen the mucous membrane made raw by too vigorous rubbing. The most important infective agent is the gonococcus, not for any pathological results it produces of itself, but because of its liability to favor secondary infection. After gonorrhea almost any other microorganisms will prove virulent for the vagina and other tissues in the genital tract, though before that they were not pathogenic.

**Gynecology from a Medical Standpoint.**—Dr. Mary Gage-Day of Kingston-on-the-Hudson said that it is often thought that the diseases so common among women at the present time are peculiar to our generation. This acts as a source of serious discouragement to many ailing women. The impression, however, is without foundation. The records of very old times in Egypt seem to show that there were specialists in women's diseases nearly 2,000 years before Christ. Special instruments, specula and the like, for the examination of women were discovered among the ruins of Pompeii, and though the knowledge of them was afterwards lost for many centuries, it is evident that much was known about women's diseases over 4,000 years ago. Recent investigations have shown that Indian women are not free from pelvic disease, although the contrary has often been asserted. Complications of childbirth among Indian women are nearly always fatal. The birth-mortality is very high.

Dr. Day said that it is sometimes very surprising to find even in well-informed women the densest ignorance of personal hygiene. Many of them need the most careful instruction, and this will often enable them to avoid conditions that are sources of great discomfort. The first thing the physician must do in all gynecological practice is find out the habits of life of a patient and correct everything that seems likely to be a source of disturbance of health. Careful examinations of the urine should be made, so as to know something about the metabolism and the possibility of the presence of nephritic disease. Four drugs she had found of importance in medical gynecology—iodine, ichthyol, boric acid and glycerin. Whenever there is marked tenderness ichthyol is the remedy that is most efficient. When metritis, especially of the hemorrhagic variety, is present, adrenalin employed internally in doses of ten drops three times a day has given better satisfaction than viburnum, ergot, or stypticin. After the menopause iodine and ichthyol are not well borne. Tissues are atrophic and do not react well even to the slight continuous irritation produced by these remedies. Dr. Day then uses a combination of Irish moss, glycerin, alcohol and boric acid, which gives excellent satisfaction. Lacerations are especially prone to be troublesome in the old, and must be treated with great care and as far as possible without the use of irritant drugs. Uterine displacements, as a rule, cannot be treated by means of the ordinary pessary in women beyond the menopause, but the belt-pessary should be used to save the destructive influence of pressure on atrophied tissues.

**Technic of Hot-Water Injections.**—Dr. J. H. Burtenshaw of New York called hot water the most important therapeutic agent in medical gynecology. Proper directions for its use are frequently neglected. The use of a small quantity of water as a vaginal injection does more harm than good. If the hand is held for two minutes in very hot water it comes out red and swollen. A ring that will slip off easily before can not be gotten off. If left for 10 or 12 minutes, however, the tissues will become shriveled, for the secondary effect of hot water is contraction of the blood-vessels. Ordinarily a hot injection taken from the toilet or the commode with a couple of quarts of water produces congestion that adds to the congestion already present. If two or three gallons of hot water are employed and the patient is advised to rest from half to three-quarters of an hour afterwards, great benefit will be derived from its use.

**Necessity for Exact Diagnosis.**—Dr. J. Riddle Goffe of New York said that at times an injudicious examination is made when the woman first comes under observation; a false diagnosis is made and all the after-treatment is directed under an erroneous impression. A recent case gives an example. A young married woman complaining of excessive menstruation was sent to him with the diagnosis retroverted uterus and tumor. She had not slept since the announcement was made to her. She proved to have nothing more than some metritis, and the uterus was in normal position. There are two schools of gynecology; one is exclusively operative, and its members confess that their offices are only for examinations preliminary to operation; the other school believes that every woman should be given the benefit of local treatment and that on the results must depend the question of operation. Fortunately the latter school has still many adherents and seems to be growing in numbers.

**Intermittent Injections.**—Dr. Richard H. Gibbons of Scranton, Pa., said that the use of hot water—the vaginal douche—was introduced by Emmet. Emmet always insisted that one of the advantages was the use of the interrupted douche as given by the old Davidson syringe. He clung very tenaciously to the theory of special benefit from the repeated impact of the water upon the cervix. He could always tell when a douche had been given some other way, and though his residents sometimes tried to catch the master in the matter

they never succeeded, and he would announce that directions were not being carried out.

**Adrenalin and Cocaine.**—Dr. Hermann Mynter said that he has used adrenalin in combination with cocaine, in order to prevent hemorrhage during operations upon the vagina, and had found the combination excellent. Small operations can be made practically bloodless.

**Advice in Fibroid Tumor.**—Dr. J. Riddle Goffe of New York said that the question of what advice the physician should give to a woman suffering from fibroid tumor of the uterus is rather difficult to answer. Fibroid tumors may cause serious complications in pregnancy; they sometimes produce obstruction of the bowel; they may be a source of abortion. When they degenerate into calcified masses they may produce inflammatory lesions of the intestines, or may lead to cancerous degeneration. At times edema occurs, and even sudden death may result. Polypoid tumors complicating pregnancy are often the cause of serious results. Histories of about 40 of them have been recently collected from the literature. In six cases gangrenous degeneration set in, and many of them caused complicated labors. Such things as breech-labors and others requiring version are noted. In eight cases septicemia resulted; there was death from sepsis in three cases; in three from peritonitis. At times, as the result of the presence of fibroid tumors, pyosalpinx and ovarian abscess or sepsis from a degenerative process may result. At times fibroid tumors disappear spontaneously. This happens so rarely as to be a medical curiosity. The use of electricity for the treatment of fibroid tumors has been a source of disappointment. There have been some reported disappearances, but these have been no more frequent than might have occurred spontaneously. As the result of electrical treatment, subsequent operation is apt to be complicated by dense adhesions. At times also pus-pockets have been noted, and these make the ultimate prognosis more serious. Curettement gives temporary relief, but frequent repetition of this is not without danger, because of the encroachment of the tumor on the uterus and the production of septic complications.

**Different Ages.**—In women who are past the menopause and in whom tumors still continue to increase in size the best remedy is entire removal of the uterus and the tumor. If the tumor is discovered during pregnancy the pregnancy may be interrupted, but a better procedure is the removal of the tumor, leaving the contents of the uterus untouched. This has been accomplished in a number of cases, though the woman must accept the danger of miscarriage that inevitably goes with it. At times it is well to allow the pregnancy to proceed with the understanding that a Cesarean section is to be performed at term. This operation will not be so frequently needed as is thought. Dr. Goffe has attended many negroes with fibroid tumors and yet has never had to perform a Cesarean operation on any of them. The only complication has been a delay of the expression of the placenta. For unmarried women carrying a small fibroid tumor the advice used to be to wait, but in the meantime not to marry. Such advice is immoral. It is wanton cruelty besides, for there is no justification for it. A small tumor may be removed through the vagina, thus avoiding the unsightly scar on the abdomen. If carefully done by myomectomy it will leave a perfectly functioning uterus.

**Fibroids in Pregnancy.**—Dr. Goffe has had an experience in which fibroid tumor was caught under the promontory of the sacrum and could not be raised higher. He suggested that a Cesarean operation might be done at term, since both husband and wife were anxious to have a child. The labor, however, termi-

nated naturally. With an expert operator a Cesarean operation at full term is safer than a myomectomy during gestation.

**More Favorable Prognosis.**—Dr. Ferguson of Troy said that while a myomectomy should be done in those desirous of children, too much confidence must not be expressed. Dissection of uteri containing fibroid tumors often showed numerous foci of myomatous tissues. Dr. Ferguson thought that fibroid tumors disappear more frequently than has been supposed. At least they cease absolutely to give symptoms and produce no pathological condition in the pelvis.

Dr. Wiggin thought that fibroid tumors not infrequently degenerate into carcinomata. This is especially true after calcification has taken place, when the irritation set up in surrounding tissues seems to favor malignancy. Even large fibroid tumors may be removed by myomectomy with excellent results. Dr. Wiggin has removed in this way tumors weighing 16 and 20 pounds respectively. The operation may be done very rapidly, as in a recent patient who seemed too weak for hysterectomy.

**Repair of Lacerations of the Pelvic Floor.**—Dr. J. H. Burtenshaw of New York said that while it was formerly taught that the maintenance of the normal positions of the organs of the pelvis depends on the integrity of the so-called perineal body, it is now generally conceded that its function is solely to give needed support to the curve of the rectum during the expression of intra-abdominal force. Rupture of this body may occur, even through the anal sphincter, yet pelvic equilibrium will not be disturbed if the muscles composing the pelvic floor remain intact. By means of drawings the speaker described the attachments of the levator-ani muscle and its fascia, laying particular stress on the important rôle of the latter in imparting strength to the pelvic floor and preventing prolapse. He questioned if the majority of the modern operations of perineorrhaphy and colpoperineorrhaphy actually restore the pelvic floor to its normal condition. As the denudation extends only through the mucous membrane of the vaginal wall, the muscles are only backed up against themselves, in which position they serve to reduce the lumen of the canal, partially close the orifice, and restore the curves of the vagina and rectum. While admitting that an operation of this kind apparently fulfils all indications, he claimed that here, as elsewhere in the body, if a muscular rent is to be closed the edges of the muscle must be freshened and closely approximated by sutures. He said that many operators have appreciated this defect in posterior-wall plastic surgery, and have evolved special methods for the suturing of these superficially denuded areas, but that in each case the object is not attained because the underlying muscles are not directly approximated. He referred to Emmet as being the pioneer in correctly attributing to the pelvic floor its proper function, but claimed that the well-known operation called by his name does not accomplish all that its author claims for it, because the levator and its fasciæ are bound to retract as soon as the retaining sutures are removed. His conclusions were as follows: (1) That the rôle of the pelvic floor in sustaining the pelvic viscera being acknowledged, a laceration of the muscles and fascia composing the most important section of the floor should be repaired in order to restore the natural equilibrium of the pelvis, and (2) that while a majority of the plastic operations on the vaginal wall restore the natural curves of the vagina and rectum and reduce the size of the vaginal outlet, to restore the pelvic floor to a normal condition approximation and suturing of the edges of the levator-ani muscle and its fascia must be imperative.



**Defect of Through-and-Through Sutures.**—Dr. Ferguson of Troy said that the use of through-and-through sutures for repairing a vaginal defect is always a mistake. They pull into circles and give occasion for the formation of scar tissue proverbially not strong. Bring the levator-ani muscle out of the sulci into which it has retired. Without this the result is only a skin-perineum, not at all efficient for holding up the pelvic structures. Bring the ends of the muscles together separately, then skin as you will, and the result will be not only apparent but actual repair.

**Indefinite Signification of Word "Colds."**—Dr. James J. Walsh of New York said that there is probably no word in medicine more used and less understood than the word cold. It is popularly thought that the disease is due to changes of temperature or to severe cold weather. As a matter of fact those who lived in high dry climates, as in Switzerland, do not contract colds as frequently as their compatriots in the lower regions of the same country. Our Canadian neighbors are not so liable to colds as those who live in a moist changeable climate, especially in crowded centers of population. Arctic explorers living through the long winter at a temperature 30 degrees below zero, do not suffer from catarrhal colds as frequently as they would in city life at home, and Nansen, after spending two years at the farthest north without once having a cold, came back to be confined to bed from this annoying affection within a week after his return. Erasmus Darwin pointed out more than 100 years ago that if the surface of an animal's body is kept cold for a prolonged period there is a loss of tone in the blood-vessels, and consequent dilatation, and the circulation becomes very much slower. For some time after warmth is restored the paralytic dilatation of the blood-vessels remains, and there is passive congestion. This disturbance in the skin leads to corresponding disturbances in underlying organs, because of the anatomical relations between the parts. Head pointed out that when affections of the internal organs exist certain skin-areas become more sensitive than usual. It is over these areas that counter-irritation must be made for the organs in question. When the counter-irritating effect of prolonged cold or of a draft is exerted upon a skin-area, then the vasomotor condition of the underlying sympathetically connected organ is disturbed. These two factors, circulation and vasomotor neurosis, are the basis of the etiology of cold.

**Exciting Causes.**—These factors, however, are only predisposing causes. Colds are usually ushered in by a chill, preceded by an incubation period. These symptoms have come to be recognized as an index of the presence of toxins in the circulation, and in the great majority of cases the toxins of bacteria. Other manifestations, as the catarrhal condition that sometimes becomes a more than mucoserous secretion, or may even go on to suppuration as in tonsillitis, show that microbes are at work. It seems clear that in most cases colds are a microbic affection. This is confirmed by the fact that they sometimes run through households with a distinct contagiousness. Colds in the head would seem to be due to the lodgment of various micro-organisms on the nasal mucous membrane predisposed to allow the invasion by the dry, heated air of city houses, which is constant source of irritation. Microbes are particularly plentiful in dust-laden rooms, in theaters, crowded meeting-places, packed street-cars and the like. In such places the affection is frequently acquired. The going out into the cold air from one of these heated places causes a blanching of the mucous membranes of the nose, and bacteria that have been held on the moist surfaces are free to be breathed deeper into the respiratory passages, or find in the anemic con-

dition itself a moment of lowered resistive vitality, when multiplication becomes easy.

**Prophylaxis of Colds.**—The prophylaxis of colds must consist then of care with regard to visits to dust-laden atmospheres, if persons are in delicate condition and are liable to colds. This is especially true for the tuberculous and for children. Besides, the immediate exit into the cold outer air from crowded places, and even from ordinary dwellings, must be avoided. There should be, as there is in the French theaters, a lingering for a while in the cooler air of the foyer and conversation with friends, in order to accustom the nasal mucous membrane to the change of temperature about to come, which often equals 40 or 50 degrees. This same precaution seems important with regard to the hallways of houses, so as to avoid too sudden a revulsion of nervous energy in the very delicate mechanism of the nasal mucous membrane. The main purpose of this membrane is to warm the air that is admitted to the lungs, and since at times the outer air is perhaps 80 degrees removed from body-heat, some idea can be formed of the difficulty of the problem.

**Symptomatology of Colds.**—Dr. George F. Cott of Buffalo said that so-called colds can perhaps be best defined as occasional catarrhal symptoms of an underlying constitutional condition that occurs during the colder weather. Colds that involve the nose and give the stuffy feelings of which patients complain are often the result and the manifestation of some local disturbance of the internasal structures. Not infrequently, however, it will be found that the rheumatic diathesis, or some digestive disturbance, or some tendency to constipation which has been at the moment exaggerated by neglect, is the real basis of the affection. If colds were considered more from the standpoint of the general health of the individual patient who presents himself, there would be better and more immediate success in their treatment. The most important element in the therapeutics of cold is undoubtedly this fact so often lost sight of.

**Treatment of Colds.**—Dr. A. Alexander Smith said that it is clear that we do not know exactly what is meant by the word cold. Ordinarily, it is a stuffing-up of the nasal mucous membrane, which gives a sense of fulness in the head, with some chilly feelings and an excess of secretion from the nose. The condition is generally accompanied by some constitutional disturbance. If there is fever above 100.2° F., Dr. Smith considers that patients should be kept in bed for a day or two until the fever comes down, for in this way time will eventually be saved and the progress of the case be much more satisfactory. Undoubtedly cold bathing and especially the cold ablution of the head and neck acts as a preventive of cold. Another means of protection is by increasing the resistive power. Many delicate persons are undoubtedly protected by the administration of cod-liver oil. Disturbances of digestion are apt to increase susceptibility to cold to a marked degree. The rule must be to increase the resisting power and get rid as far as possible of disturbances of the general health, if the usual crop of colds in winter is not to be harvested.

**Use of Drugs.**—The old custom of giving calomel and opium and quinine is an excellent practice. Ten grains of Dover's powder or Tully's powder, with five grains of quinine in the evening, followed the next morning by an active cathartic pill, is the best possible beginning of the treatment of colds. The familiar hot mustard foot-bath of domestic tradition is undoubtedly beneficial. The rhinitis tablets that are on the market, containing quinine and belladonna, are efficient if used during the first few hours, but as a rule they are given in too large doses. The constitutional condition is im-

portant in colds, and if the rheumatic diathesis be present alkalis should be prescribed. The salicylic acid compounds also are of service in relieving the symptoms and shortening the course of the affection, provided they are well borne by the stomach. The inhalation of camphor vapor, has a distinct value in adding to the comfort of the patient. If the skin is dry and hot, with pains and stiffness of the muscles, certain of the coal-tar products, especially phenacetin, should be employed. It is a common experience, however, that these remedies give a certain relief of symptoms, and then produce a depressant effect, from which the patient does not react well in throwing off the cold. While the temptation is strong then to give the patient the first measure of relief they afford, it is well not to use them except in feverish individuals who must be made able to continue their occupation for some special reason. A Turkish bath, if taken at the very beginning of a cold, may be useful in shortening the course of the affection. But if two or three days have passed before it is taken it does not give relief, and may only afford an opportunity for recrudescence. The use of saline solutions for the cleansing of the nose, whether employed in the form of a douche or snuffed up from the hand, undoubtedly affords a certain relief of symptoms, but aurists have insisted so much in recent years on the danger of producing complications in the Eustachian tube by this means that it is better to forego them. For throat complications and cases in which the pulse is not very vigorous tincture of iron in 20 minim doses several times a day is an excellent remedy. For tendencies to the recurrence of colds cod-liver oil is the best remedy. It is especially useful in delicate children. When, in spite of careful hygienic living and attention to the digestion and any other functions that may seem liable to be disordered, colds are still frequent, a change of climate should be advised, for colds are undoubtedly a drain upon the system.

**Local Treatment.**—Dr. Thornton of Buffalo said that the use of certain local applications is of service, not only for the relief of symptoms but also in shortening the course of a cold. The ordinary alkaline solutions employed in nose-work aid in the removal of secretions and lessen the turgescence of the nasal mucous membrane. For more lasting effects, when the secretions are not so free, oil sprays made of dilute solutions of thymol or eucalyptol are not only grateful to the patient but efficient for symptomatic relief.

**Dry Air and Colds.**—Dr. Freudenthal said that not all colds are infectious, but that undoubtedly the modern custom in the heating of houses is responsible for the irritable condition of mucous membranes that predisposes to colds. Often the humidity of a modern heated house will not be more than 20 to 30 per cent. when it should be over 60 per cent. Under these circumstances the air constantly takes up moisture from the mucous membranes and leaves them in a dry, susceptible condition.

Dr. Einhorn said that not all the affections sometimes considered to be due to bacteria are really to be classed as infectious. Since Nansen has been mentioned in connection with the subject, it is well to remember that while at the extreme north he acquired acute articular rheumatism. This is sometimes said to be a bacterial disease, and yet it is well known that bacteria are very rare in the arctic regions, and it would be surprising to think of the specific microbe of rheumatism existing at the farthest north.

**Various Remedies for Colds.**—Dr. Purdy of New York said that the remedy needed for colds should be at once diuretic, diaphoretic and laxative. For this, spirits of mindererus with some laxative, is the best.

Most colds can be cured in three days with this preparation.

Dr. Acker said that colds are nearly always ushered in by sluggish bowels and acid stomachs. For these conditions he gives eight to ten grains of Dover's powder, ten grains of nitrate of potash, and five grains of quinine. Patients are better in the morning and the cold is aborted.

Dr. Murdoch said that for a single remedy the fluid extract of gelsemium is the most generally effective, and acts almost as a specific.

Dr. Strattenham said that colds must be treated according to the individual. If the rheumatic diathesis exists the salicylates must be used; if anemia be present one of the preparations of iron is most effective.

Dr. Brownell said that the underlying cause of colds is frequently some pathological condition of the nose or throat. The patient's constitutional condition must be improved and then the local affection treated carefully.

Dr. Bayley said that the best single remedy for a cold is eucalyptol given in four or five drop doses till the ears ring. If given sufficiently early in the affection this may break up a cold in 24 to 48 hours.

**Individual Treatment and Diathesis.**—In closing the discussion, Dr. Walsh said that the principal item with regard to the management of colds must be their individual treatment. A cold is not an entity, but a heterogeneous combination of symptoms, due to special conditions in each case. Nasal colds usually have a basis of some pathological condition in the nose. Much has been said of an underlying diathesis, and especially of the rheumatic diathesis, and its effect upon colds. Just what is the rheumatic diathesis we do not know. A quarter of a century ago the text-books and the old professors spoke of the hemorrhoidal diathesis. Patients who had suffered long from piles were supposed to be so constituted as to suffer from them. Physicians were even fearful of stopping the flow of blood from piles, and do harm by producing congestion. Fortunately the profession has gotten away at least from this rampant manifestation of diathetic theory.

It is to be hoped that the same thing will occur with regard to the rheumatic diathesis. No one now admits that the salicylates are a specific for rheumatism. They are only coal-tar products a little less depressant than antipyrin or acetanilid. Why should these imaginary specifics be recommended for an imaginary diathesis?

**The Pancreas in General Medicine.**—Dr. Alfred Stengel of Philadelphia reviewed recent progress with regard to the diagnosis and treatment of pancreatic conditions. The pancreatic fluid is not essential to fat-absorption, and bile may replace its action almost wholly. The presence of fatty diarrhea is by no means necessary then for the diagnosis of pancreatic conditions. In fact, the absence of fatty diarrhea is more significant than its presence, the latter pointing rather to some biliary disturbance. The proteolytic function of the pancreas gives no better indication. Rapid emaciation does not always take place, though sometimes noted, and reduction in weight may mean reduction in fat-absorption. There is a certain amount of failure of absorption of albumin and perhaps this will yet prove to be a prominent symptom. The relation of pancreas to glycosuria is the most interesting feature of the recent progress of our knowledge. At first degenerations of the pancreas were thought to be merely coincident to glycosuria, or secondary to the wasting it produced. Total removal in certain animals, however, showed that glycosuria followed absence of the gland.



If a certain amount of the pancreas were left, however, no sugar occurred in the urine, unless degeneration of the pancreatic remnant occurred. This latter fact accounted for certain anomalous results. It seems probable then that the pancreas secretes a ferment for the destruction of sugar in the organism, and when this is absent, there is an accumulation of sugar. In a number of cases of diabetes what were supposed to be normal pancreases were found at autopsy. As a matter of fact only special portions of the glands are degenerated in pancreatic diabetes. These are the so-called islands of Langerhans, collections of cells which have no connection with the secretory system of the pancreas, but are arranged as if they were blood or ductless glands. In a recent case Dr. Stengel had a special example of the degeneration of this portion of the pancreas. The patient when admitted was apparently suffering from uremic coma. Large amounts of albumin were to be found in the urine, but no sugar. There was a history of diabetes, however, and after 24 hours sugar and acetone and diacetic acid appeared in the urine. The patient died and at the autopsy the pancreas seemed normal to the naked eye. There were, however, on microscopical examination, hyalin degeneration and necrosis of the islands of Langerhans.

**Acute Hemorrhagic Pancreatitis.**—In recent years has come an idea of recognizing acute pancreatitis. When there is deep-seated pain in the upper zone of the abdomen, accompanied by profound depression and collapse, the patient may be suffering from perforated ulcer of the stomach or duodenum, or from angina pectoris, or from certain nervous diseases, but the affection present may be acute hemorrhagic pancreatitis. This is especially likely to be the case if the pain radiates to the left shoulder and the patient can feel that its seat is deep in the abdomen. Pancreatic calculi have now been diagnosed in five cases, and the possibility of their presence must not be forgotten. The principal symptoms are repeated attacks of deep-seated colic, of which one patient said that she could not tell whether it was nearer the back or the front, with radiation of the pain to the left shoulder and no jaundice.

**Metabolism of Myxedema.**—Dr. C. N. B. Camac of New York detailed the study of the metabolism of a case of myxedema, before and after administration of thyroid extract. Contrary to the usual experience, it was found that though the patient decreased in weight there was no greater destruction of proteid material than before the administration of the thyroid extract. While the patient improved very materially, in fact considered herself cured, the process by which this was brought about is not a simple reduction of proteid metabolism, something more mysterious. Further studies are needed to make clear in just what the change in metabolism consists, and what was accomplished in the present case. The physiological chemistry of this case, as studied by Drs. Wolff and Camac, shows that there is an important field for metabolic studies in this and cognate affections.

**Present Position of Gall-Stone Surgery.**—Dr. William Wotkyns Seymour of Troy, N. Y., said that it is now a quarter of a century since Sims first operated for gall-stone. It is time now to study out the conclusions. Recent success in gall-stone surgery has been so satisfactory that there is temptation to say that every case should be operated upon. This is to go too far, but whenever there is a continuance of the symptoms, or any disturbance of the general health, or repeated attacks, operation is the safest procedure for the patient. The pernicious idea that there is any possible solution of gall-stones by means of internal medication must be removed. It has given hecatombs of victims. An attack of gall-stone colic may not recur

for many years, and this gives the illusory idea of medical relief. Dr. Seymour has seen one case with 18 years of interval between attacks. In another recent case a physician boasted that he had an attack of gall-stone colic nine years ago, and that by taking soda every day he had dissolved them. Just six weeks later he died from perforation of biliary passages, and 153 stones were found in his gall-bladder. Pain occurs only when there has been considerable inflammation, and it is due to the inflammatory process and not to the movement of the stones. Hence many cases escaped this symptom entirely, and the stones are found at autopsy. Deep jaundice is not necessarily connected with gall-stones. As a rule it occurs rather in cancer. In eight of Kehr's cases jaundice was absent. Tait suggested the opening of the gall-bladder and stitching it to the wall. With this operation Kehr and Mayo Robson have had two per cent. of mortality in a large number of cases. Until within a few years the custom was to crush stones in the common duct by means of the fingers or padded forceps. Marcy incised the common duct and showed that drainage of the duct was possible. The attachment of the gall-bladder to the abdominal walls after the operation is not a source of special discomfort, even later in life, when the scar tissue might be expected to hamper movements. At times during severe coughing some strain may be put upon the attachment, as Dr. Seymour has had opportunity to note in his own person.

**Degeneration to Malignancy.**—Dr. Richard H. Gibbons of Scranton, Pa., said that the presence of gall-stones undoubtedly leads to scars which are irritative and may form a nucleus for cancerous degeneration of tissues. Early operation therefore should be done before inflammatory conditions have caused the formation of adhesions and at a time when radical operations are possible.

Dr. Seymour, in closing the discussion, said that the frittering away of time in gall-stone cases is often due to the profession. Patients would be willing to be operated upon if told distinctly that it was the better course, as it undoubtedly is, especially if the operation can be performed before the internal condition has become too complicated.

**Indications for Nephropexy.**—Dr. Augustin H. Goelet of New York read a series of abstracts from letters of distinguished surgical authorities who consider nephropexy indicated in many cases. Dr. Kelly of Baltimore said that it is now one of his commonest operations, and he performs it whenever there are attacks of intermittent pain and the upper pole of the kidney is palpable through the abdominal walls. Dr. Noble of Philadelphia said that often the symptoms supposed to be due to movable kidney are neurotic, and what the patient needs is a rest-cure. When there are local symptoms with pain and sense of weight, then the kidney should be fastened in place. Dr. Morris of London said that whenever there are renal crises immediate nephropexy should be advised. Dr. Goelet himself is of the opinion that even when corsets or other appliances will hold the kidney in place and there may be as a consequence no discomfort, the movability of the kidney may lead to degeneration of the kidney itself, or may by pressure upon sensitive organs produce pathological conditions. To his mind pads and bandages do more harm than good.

**Non-operative Treatment of Movable Kidney.**—Dr. A. E. Gallant of New York said that when movable kidney is accompanied by enteroptosis or splanchnoptosis it is useless to fasten up one of the prolated organs, since all cannot be operated on. He has been studying the corset for nine years and is sure that it can be so applied that it is impossible for the kidney to

get out of place. As a rule the neurotic symptoms are not due to the misplaced kidney, but to the general nervous condition.

Dr. Parker Symms said that many cases of floating kidney do not need to be operated upon. Operations in neurotic cases where the floating kidney is not a direct etiological factor do harm rather than good. At times, however, floating kidneys are directly causative of certain digestive disturbances and painful conditions in the abdomen, and in these cases Dr. Symms has done nephropexy with satisfactory results.

**Exaggerated Opinion of Floating Kidney.**—Dr. Einhorn considers that many patients have an exaggerated opinion as to the symptoms produced by floating kidney. He has seen very many cases but does not consider that disease of the kidney itself has ever developed as the result of movable kidney. Accompanying floating kidney there is nearly always floating colon, as well as floating stomach and floating liver. There is even a floating spleen. To be logical one should operate on all of these; operation on the kidney alone will not cure the patient. Nutritive and hygienic measures, especially with attention to the diet and the digestive organs, will give excellent results without operation, and operations often fail to bring any relief. Besides, even in the best hands there is two per cent. of mortality of nephropexy, and that must always be considered.

**Obesity and Sexuality.**—Dr. Heinrich Stern of New York considered the relations between asexualization or the non-use of the sexual organs and obesity. Eunuchs grow stout, and women usually grow fat after the menopause. Men late in life are also apt to take on weight; so there seems to be some connection between this and improcreance. Not all women, however, grow stout after the menopause, and in certain statistics less than one-half of them have increased in weight. Breeders of fowls and cattle know that animals fed richly, especially if kept in the dark, grow stout rapidly. Absence of sunlight seems to decrease metabolism. The home-keeping that is so common among elderly men and women seems to have something to do with their taking on weight. It is probable, however, that the ovaries supply some internal secretion that causes more active metabolism in women before the change of life.

**Idiopathic Brain Abscess.**—Dr. Hermann C. Gordinier of Troy, N. Y., described a patient who suffered from brain abscess with focal symptoms, which was diagnosed as brain tumor. The patient had no family or personal history that could lead to a diagnosis of tumor and had had no venereal disease. He was taken with severe unilateral convulsions, which lasted for some time and then spread to the whole of the body and were accompanied by loss of consciousness. He was well for four weeks and then had another attack. Two weeks later there was still another, always beginning on the left side. In the interval there was no numbness in the limbs. After the third attack, however, the left arm was awkward and weak. When he was admitted to the hospital his left knee-jerk was increased, ankle-clonus was present, the Babinski reflex was present on the left side, while the reflexes on the right were normal. The patient was able to recognize all objects, though his cerebration was somewhat slower than normal. There was no albumin, sugar or pus in his urine. When the skull was opened nothing abnormal was noted; there was no bulging, and the only thing unusual was an area that did not pulsate. This was explored with an aspirating-needle, yet nothing was found. The skull was closed, and the patient came out of the operation feeling somewhat better. There was no headache and were no unusual symptoms. The day

after the operation, however, fever set in, considerable headache was complained of, and the convulsions recurred and the patient died. At the autopsy an abscess was found just beneath the cortex of the middle third of the ascending frontal convolution, extending across the precentral lobule to the bases of the first and second frontal convolution. Had a needle been put in at a number of places this abscess would undoubtedly have been found. The interesting fact about the case is the absence of fever until just before death and the complete absence of optic neuritis, coma or drowsiness. A microbe was found in the pus, but it could not be recognized owing to the changes that had taken place in it from having been in the hardening fluid for so long a time.

**Melancholia Agitata.**—Dr. W. E. Douglas of Middletown read a paper describing a case of this symptom-complex. There was absolute restlessness, so that sometimes for days together she would turn over in bed more than 60 times an hour. Her delusions were vehement and kept her in a constant state of mental excitement. It is important not to confound the affection with mania, which it resembles somewhat because of the restlessness. The delusions, however, are distinctly melancholic. Eternal damnation, everlasting disgrace, utter perversion were all her thoughts. At times she seemed to be benefited by tincture of gelsemium. Her bowels were regulated and careful diet insisted upon. She died, however, from exhaustion.

**Idiopathic Atrophy of the Skin.**—Dr. Will R. Abrahams of New York presented a case of this rare disease, of which not more than a dozen cases have been reported all together. The patient is now fifty-eight years of age and denies specific history. At thirteen he suffered from eczema on the feet and ankles, and after this some small ulcers developed on the leg. Later there was marked hyperemia of the toes and dorsum of the foot. This gradually became violaceous in color and the skin became thin and papery. On the left leg, where the process was the worst, large painful ulcers resulted, and as a consequence there are some patches of hard cicatricial tissue that appeared to be similar to scleroderma. The general feeling of the skin is that of tissue-paper, or, as an observer said, crumpled-up cigarette paper. The limbs are cold, there is absence of sweat, absence of goose-skin on exposure to cold, and as the man grows older the atrophic process is spreading faster. Within the last year it has advanced several inches upward on the buttock.

**Dermatitis Atrophicans.**—Dr. William S. Gottheil of New York described the pathological conditions found in the Dr. Abrahams case. A portion of skin was removed from the buttock where the atrophic process was comparatively recent. This showed an absence of all fat-tissue, the presence of but few scattered sweat-glands, of very few hair-bulbs, and an atrophy of all the layers of the skin. The papillary layer looks crushed down and blended together. The important observation is the finding around the blood-vessels of plasma-cells and all the phenomena of inflammatory action. The disease is evidently a chronic inflammation of the skin, as some other observers have announced, though not all are agreed as to this. The best name for it then would be dermatitis atrophicans, and not idiopathic atrophy of the skin.

**Unrecognised Toxic Insanity.**—Dr. T. D. Crothers of Hartford, Conn., said that there are many moral lapses supposed to be due to perversions of the moral sense which are really due to various toxic conditions. Many professional and business men use drugs and alcohol to excess beyond even the knowledge of their nearest friends at times. There are moral lapses without doctor's certificates. Such people are apt to be



queer, capricious, of very uneven disposition from day to day. They are cranks, extremists, paranoiacs. At times they are leaders in good work, and their lapses are considered to be backslidings. As a consequence of their varying mental dispositions, whether under the influence of a drug or without it, they are apt to be unreliable. There is a steady decline of physical and mental vigor, and patients are apt to become political intriguers, with little plots and plans, and to be very excitable under irritation. Such conditions are unrecognized except in later stages. It would be a wise extension of psychiatry, however, if these cases were properly classified.

#### THIRD DAY—OCTOBER 22.

**Strangulated Hernia at Twenty-seven Days of Age.**—Dr. L. W. B. Reed described a case of strangulated hernia in a child of twenty-seven days, followed by successful operation and recovery. This is the youngest case on record. There have been over 100 cases of children under one year of age reported for operation for strangulated hernia, and a prognosis of the operation depends on the length of time that the strangulation has been allowed to continue and on the damage that has been done to the tissues by taxis. No operator need be afraid to take these cases in the ordinary surgical way, and no physician is justified in delaying recourse to surgery until the prognosis is bad.

**Local Anesthesia in the Radical Cure of Hernia.**—Dr. J. A. Bodine of New York read a paper on this subject in which he insisted especially on the facility with which operation for the radical cure of inguinal hernia could be done under local anesthesia, and on the encouragement that the adoption of this procedure would give to many patients who now hesitate to undergo operation from dread of general anesthesia. Five per cent. of the population are said to be ruptured, and many lives would be saved if these hernias could be operated upon before serious complications take place. Not more than one-half grain of cocaine need be employed, if it is only judiciously distributed and properly used.

**Infiltration of Nerves.**—Three nerves are in the neighborhood of the field of operation for the radical cure of inguinal hernia, the hypogastric branch of the iliohypogastric, which runs from the iliac crest inwards beneath the aponeurosis of the internal oblique muscle, the inguinal branch of the ilio-inguinal nerve, and the genital branch of the genitocrural nerve. The nerves are mentioned in the order in which they are liable to give pain. The two latter branches are sometimes absent or difficult to find. There is a white fibrous cord, a remnant of the fetal peritoneum, which is sometimes found running along the front of the hernial covering, and this should not be taken for a nerve. Each of the nerve-sheaths should be infiltrated with a drop of cocaine solution. For this the strength need not be more than .1 of 1 per cent. The important feature is the proper infiltration of the skin before the incision is made. This should be done by inserting the needle of the hypodermic syringe just beneath the upper layer of epithelium and injecting a drop or two. This raises a wheel. The line of the incision should then be followed down, injecting a drop at each successive point until the site of the incision is all infiltrated. There is then a pause of a few minutes to allow the cocaine to act. After this the incision can be made painlessly. It must not be carried down further, however, than the lateral end of the suprapubic skin-fold. An inch lower than this six to 13 bleeding-points will have to be ligated, and these will each give acute twinges of pain at the very beginning of the operation, and will therefore demoralize the patient. After the skin has been penetrated, if

only the iliohypogastric nerve has been infiltrated some cocaine should be injected into the conjoined tendon. The cord should not be lifted up during the operation on a piece of gauze, as is sometimes the custom, but a strand of catgut should be employed as an elevator for it. Besides, the cord may become twisted on the gauze, and if some inflammatory exudation occurs the structures of it may become adherent in such a way as to lead to atrophy after the operation is over. The cocaine solution should always be made perfectly fresh, and the easiest way to be sure of its strength is to dissolve a tablet of one grain of cocaine in two drams of water. This gives approximately a one per cent. solution, which can be easily diluted to a quarter or .1 of 1 per cent. solution. The cocaine, if kept, develops a fungus and is no longer sterile. Even severe operations may be accomplished by local anesthesia. Dr. Bodine has done five strangulated hernias, and in one case 16 to 18 inches of intestine were handled.

Dr. John A. Wyeth of New York said that he usually employed local anesthesia for operations in simple hernia. Nerves that crossed the field of operation, and especially the iliohypogastric, are always infiltrated. If other branches of nerves cannot be found infiltration is done in their neighborhood. For difficult hernia he considers that general anesthesia is better. The sterility of the cocaine solutions is extremely important. They must be made fresh for every operation. Not a single case of suppuration has occurred among all the patients operated upon by this method at the Polyclinic Hospital. Operators should not be discouraged by some complaints of pain on the part of patients at their first operations, as the method requires experience before it can be applied perfectly.

**Old Difficult Hernia.**—Dr. Ferguson of Troy, N. Y., said that the use of local anesthesia is suitable for simple forms of hernia, but for old and difficult cases in which hernia has been long irreplaceable it is a kindness to the patient to give a general anesthetic. Very few patients will allow the use of the extreme Trendelenburg position, which is sometimes necessary in these cases, nor will they permit the excision of the omentum, which is also sometimes necessary.

Dr. Lyle said that he prefers to use a one-half of 1 per cent. solution for skin-infiltration. If the quarter of 1 per cent. solution is used and the operation takes some time, there is apt to be some sensitiveness of the skin when the sutures are being put in for wound-closure. As morphine is a perfect physiological antidote to cocaine, there is no danger in giving something more than one-half a grain of cocaine, and Dr. Lyle has not feared to give one grain to 1½ grains. If any symptoms are noted the morphine is at hand and can be used to counteract them. Less of the solution of cocaine is needed if it is used warm. No nerve should be cut during the course of the operation, and a primary union should be obtained as far as possible, so that the tissues shall be brought together without overstretching and without having to pull stitches too tight.

Dr. Ochsner of Chicago said that personally he had had no experience with local anesthesia in operations for the radical cure of hernia, but he was so much impressed by Dr. Bodine's paper that he would have some before long.

Dr. Harvey of Troy said that in cases of strangulated hernia where the patient is very low general anesthesia may prove very depressing, and the operation can be done with better results under local anesthesia.

**Omental Traction and Shock.**—Dr. Richard H. Gibbons of Scranton, Pa., said that if the omentum is pulled upon in such a way as to make tense its visceral attachments shock is sure to result. Where the omen-

tum is adherent it must be detached gently and never by lifting it up so as to make both ends of it tense. This is an important rule, as any surgeon knows who has had a patient collapse as the result of this ill-directed omental traction.

Dr. Gallant of New York said that when properly employed one drop of cocaine will do the work for which some operators use 10. The solution does not need to be spread laterally, but should be put just beneath the upper layer of cells of the skin. If the cocaine solution is slightly acid no fungus develops in it, nor does it change if exposed to the light, but is effective for a long while.

In closing the discussion, Dr. Bodine said that pulling upon the peritoneum or omentum always causes intense pain and should be avoided. At the beginning of an operation care should be taken not to disturb the patient's mind and not to inflict any pain. "Do not say 'hand me a knife,' or a ten per cent. solution of cocaine will not suffice to make the incision painless.

**Hot-Water Injections in Cavernous Angioma.**—Dr. John A. Wyeth presented a case of large cavernous angioma of the back, most of which had been obliterated by means of injections of boiling water. This is the seventh case that he has operated on in this way successfully. One of the cases was a large cirroid aneurism of the scalp. He has had a special syringe prepared into which boiling water is drawn directly, and if necessary can be heated afterwards over an Argand burner. The instrument is handled with asbestos gloves. The method is a home-made, simple, but entirely aseptic procedure and commends itself for these hitherto discouragingly intractable cases.

**Intestinal Obstruction.**—Dr. John B. Harvey of Troy reported a series of cases of operations for intestinal obstruction. In the first case obstruction seemed to be due to the passage of a gall-stone. In another there were adhesions because of an old peritonitis. In the other cases malignant growths were the cause of the intestinal obstruction. Sometimes these increase in size insidiously and suddenly give rise to symptoms. Often there are constitutional symptoms, such as loss of weight, before intestinal symptoms are noted. Cancerous obstruction is liable to occur, especially in the large intestine, and by preference in either the sigmoid or the rectal region.

**Radical Cure of Gastric Cancer.**—Dr. William J. Mayo of Rochester, Minn., said that cancer of the stomach is hopeless without operation, while it is not entirely hopeless if operation is done in time. Of 183 cases collected by Murphy, eight per cent. were alive after three years. This is at least as good a percentage as can be claimed for operation for cancer of the neck of the womb. Even in cases where the cancer recurs, relief is afforded until shortly before death, while without operation, the condition is a source of extreme and increase in size insidiously and suddenly give rise to glimmer of hope, but the possibility of a cure. If the diagnosis could only be made early enough many more operations than at present would be successful. Fortunately the pylorus which is most often affected by cancer of the stomach is the most movable portion of the organ. There is much less metastasis or lymph-involvement than has been thought. The teaching that tumor contra-indicates operation, yet that without tumor diagnosis is not certain, has been the source of many a delay that made cases utterly hopeless. Laboratory diagnosis fails early in the case and serves only to lead to procrastination. A history of ulcer of the stomach in cases of suspected cancer is a very valuable hint as to the malignancy of subsequent symptoms. Dr. Mayo has been twice deceived. Once he excised a simple ulcer, as he thought, and it proved to be epithelioma-

tous. On another occasion he operated for malignant tumor and found a simple ulcer causing the gastric symptoms.

**Technic of Operation.**—Dr. Mayo removes the entire carcinoma and all suspicious-looking tissues in the stomach itself and in the duodenum. He then closes up the stomach and the intestinal opening completely. By means of a Murphy button gastrojejunostomy is performed, care being taken to insert the button at the lowest part of the portion of the stomach that remains. One of Dr. Mayo's cases is alive three years and five months after the operation. In one nearly the whole stomach was removed, yet the after-course of the case was very satisfactory. Many die within the three-year limit, but all were given great relief of symptoms, and this relief continued until near the end of the affection.

**Non-malignant Gastric Conditions.**—Dr. A. J. Ochsner of Chicago said that he has now operated for non-malignant conditions of the stomach in 27 cases. Two of these were perforating ulcer and the patients were in collapse. There was a fatal termination. It is evident that this condition can only be treated successfully by very early operation. Eight simple ulcers were operated upon with operative success and subsequent relief of the symptoms for which the operation was undertaken. At times, when an ulcer of the stomach perforates, inflammatory adhesions have so walled in the opening that general peritonitis does not ensue. The condition may not be discovered until the resultant subdiaphragmatic abscess is opened. Ulcers of the stomach, therefore, should be treated radically whenever they give serious and repeated symptoms before dangerous complications ensue. The presence of stones in the gall-bladder may cause spasm of that viscus and perforation with resultant peritonitis that may be extremely difficult to differentiate from perforation of a gastric ulcer. Chronic appendicitis may set up peritonitis with resultant adhesions that disturb the movement of the stomach in such a way as to lead to the thought that there is some gastric condition at hand. As the result of the adhesions the pouching of the stomach becomes greater, and the consequent overloading leads to further dilatation. These conditions nearly always require operation. Ordinarily the stomach slants from the cardiac end to the pylorus. Whenever pathological conditions occur, however, there is apt to be a pouching of the greater curvature. When this becomes worse by accumulation of food materials the original condition is often obscured. The tendency to pouching of the stomach always complicates operations upon the pylorus. Food, instead of being moved gently down a slightly inclined plane, must be moved up-hill owing to the sagging of the greater curvature. Almost inevitably then post operative symptoms will occur. Ulcers that are removed in the pyloric region are almost sure to recur as a consequence of the failure of the stomach to empty itself properly. When the pylorus is removed for malignant disease the same unfortunate conditions are apt to assert themselves. Finney's new operation of pyloroplasty may ameliorate these sequelæ, but the operation of choice in most cases seems to be the complete closure of the stomach and of the cut intestine and the performance of a jejunostomy at the lowest point.

**Simple Ulcers of the Stomach.**—With regard to simple ulcers of the stomach Dr. Ochsner is of the opinion that they should be removed if possible whenever they give sure signs of their presence. On the posterior wall of the stomach it may be impossible to remove them. At times owing to the inflammatory thickening around an ulcer it may be hard to distinguish it from cancer. The existence of enlarged lymphatic



glands is not distinctive, since they occur in both conditions. There is no doubt that freer operations on the stomach will save many lives.

In opening the discussion Dr. Wyeth said that surgery, and not medicine, is the treatment of cancerous conditions of the stomach. Surgery may not give great hope of relief, but it gives the only hope. The physician fails in his duty who does not call a surgeon in consultation early in the case.

**Leucocytosis for Differential Diagnosis.**—Dr. Wilhelm Finder of Troy said that leucocytosis is a differential diagnostic point between ulcer of the stomach and cancer of the stomach. In ulcer the leucocytosis exists for a while at the beginning of the case, but is never very marked, and practically disappears later. In malignant disease there is a constant increase in the number of leucocytes present. Dr. Finder has confirmed his observations in this matter at autopsies.

Dr. Gibbons said that the most important aid to diagnosis in obscure stomach conditions is early exploratory laparotomy. This involves no danger, and it gives absolute information. The difficulty with gastrojejunostomy has always been the liability to the formation of a vicious circle by which the bile is thrown back into the stomach and becomes a source of intense irritation with vomiting and anorexia and worse constitutional condition than before the operation.

Dr. Mayo, in closing the discussion, said that the reason for delaying operations upon the stomach is that practitioners depend too much upon text-book opinions, some of which are still relics of the day when surgeons operated in cuffs. None of the opinions of these older surgeons should have any weight in abdominal surgery. With regard to the vicious circle by which bile is carried back to the stomach in gastric jejunostomy, Dr. Mayo said that it could be prevented by making the opening at the lowest portion of the stomach. In the old operations the posterior wall of the stomach was selected because it was less vascular. The vascularity, however, makes very little difference if the surgeon will but take proper precautions.

In closing the discussion Dr. Ochsner said that the vicious circle followed by constant vomiting had proved to be a source of so much trouble that he had given up gastrojejunostomy until he saw Dr. Mayo perform it and fasten the intestine to the lowest point of the stomach, when he realized that this would obviate all the objections. He has now performed 48 operations of this kind without vicious circle. After the operation the patients are fed by the rectum exclusively for two or three or four days, according to the individual patient. Then food is given by the stomach only in small quantities. If vomiting occurs, the pharynx is cocaineized and the stomach washed out.

**The General Practitioner and Kidney Surgery.**—Dr. George A. Leitner of Piermont described two cases in which extirpation of the kidney was successfully done in a small hospital. In one of the cases the patient was suffering from stone in the kidney, pyelonephritis and malignant degeneration of the kidney. In this case the bands of malignant tissue extended also to the pancreas, though the patient did not suffer from the emaciation that is so often said to follow malignant disease of the pancreas. The patient survived the operation for many months. In the other case an extensive tumor of the kidney, that proved to be malignant in character, was operated upon through the abdomen, and the kidney was removed. Two years and five months after the operation the patient is alive and in good health, and was presented at the meeting.

**Apparatus for Esophageal Stricture.**—Dr. Theodore Dunham of New York described three forms of apparatus for the passage of esophageal strictures. One

of them consists of an olive-pointed bougie that follows a guide through the stricture. A second form is for combined cutting through the stricture by means of the movement of a string, but without the necessity for gastrotomy. The third form is for use in strictures requiring gastrotomy, and the directing power is a stream of water which is made use of in order to guide a string through the stricture. Dr. Dunham, by means of an apparatus into which were introduced larger and smaller tubes in imitation of esophageal strictures and pouches, demonstrated how easy it is to pass the string with the aid of water. He also showed how the string may be carried down the throat by performing it on himself, when it took but a few minutes to swallow over a yard of rather thin material.

**President's Address.**—Dr. Alvin A. Hubbell of Buffalo then read the President's address, in which he dwelt on the necessity for high ideals in the practice of medicine and on the benefit of a code of ethics. The practice of medicine is much more than a business; it is a noble profession. There is unfortunately no definite tribunal to which violations of medical ethics can be carried in this country. The medical censorship in England and the German court of medical honor represent tribunals to which an appeal can be made. It is to be hoped that notwithstanding the absence of such an institution medical ethics in this country may not degenerate, but that the union of the profession of the country under the new code to be adopted by the American Medical Association may prove a stimulus to a united and friendly professional brotherhood.

#### SYMPOSIUM ON TYPHOID FEVER.

**Serum Reaction in Typhoid.**—Dr. Thomas W. Hastings of New York read a paper in which he dwelt upon the difficulties of interpreting the serum reaction and what precautions it must be surrounded by if it is to give assurance from a diagnostic standpoint. Recent progress in medicine with regard to paratyphoid fever and the many bacilli which, while resembling the Gaffky-Eberth bacillus, are yet very distinct from it, have still further complicated the problem. The old rule that blood that would cause the agglutination of a culture of typhoid bacilli in dilutions of one to twenty was surely a typhoid-fever case, can not now be assumed to be absolute, and the recent investigations by bacteriologists all over the world show that higher dilutions must be taken. During epidemics of typhoid fever there are many affections supposedly distinct from typhoid in which the Widal reaction may be found. In a certain number of cases of puerperal sepsis this has proven true, and there seems no doubt now that puerperal fever may be due to infection of the uterus with the bacillus typhosus. The serum reaction will probably show that other affections also are due to this manifoldly pathogenic bacillus.

**Bacteriology of Typhoid Fever.**—Dr. George Blumer of Albany said that until recently typhoid fever was supposed to be an intestinal disease and the occurrence of the typhoid bacillus outside of the intestinal tract was considered to be exceptional. When the typhoid bacillus was found in the blood typhoid septicemia was spoken of, and the case was considered serious. By diluting the blood, however, it was found that many cases of typhoid fever had the bacillus in the blood. Recent observers have shown that considerably more than half the cases present this feature. In recent years Neufeldt and others have shown that at the beginning of typhoid fever the bacillus finds its way from the blood into the rose spots and that in 71 per cent. of the cases bacilli are demonstrable in these lesions. Fraenkel showed that they occur in the lymph-spaces around the blood-vessels.

**Typhoid Bacilli in Urine.**—It is now known that typhoid bacilli occur very abundantly in the urine of typhoid patients. Usually they are not found in this fluid until late in the disease, as a rule not until the end of the second week, sometimes not until convalescence has set in. In one case it was estimated that 5,000,000 typhoid bacilli existed in a cubic c.c. of urine. According to this estimate many billions of typhoid bacilli would be passed in the day. At times there is discomfort as the result of the passage of these micro-organisms through the kidney, but frequently there are no symptoms at all. Typhoid bacilli have been found in the urine before the Widal reaction occurs. This infection of the urine is evidently quite as important as that of the stools.

**Biliary Typhoid.**—A few cases of typhoid bacilli in the gall-bladder were reported some years ago, but these were looked upon as rarities. Dr. Flexner has shown, however, that they occur in 50 per cent. of the gall-bladders of patients dead from typhoid fever. At times there is no reaction of the biliary mucous membrane to the presence of the bacteria, but not infrequently there is distinct cholecystitis. As a rule the typhoid bacilli seem to gain an entrance to the biliary tissues through the blood. The cases in which there is an ascending affection from the intestines are rare. Cholecystitic lesions sometimes replace intestinal lesions, giving biliary typhoid fever. The presence of typhoid bacilli in the gall-bladder is of interest because of its connection with gall-stones. At times gall-stones form around the products of microbial degeneration. Not infrequently infection takes place in gall-bladders already in a lowered state of resistance on account of the presence of stones.

**Non-intestinal Typhoid.**—Louis, the distinguished French physician who first recognized the distinction between typhoid and typhus fever, recognized also that some cases of typhoid fever run their course without intestinal lesions. It is now known that these cases are not near so infrequent as was thought, and the bacillus has been found in many serous and mucous inflammations quite distant from the intestines. Meningitis, various forms of pneumonia, even metritis and inflammations of the spleen and liver are admitted by pathologists. Inflammations of the vascular system have been noted in recent years. The endothelium of lymph-spaces and of veins take on an inflammatory process as the result of typhoid fever. Some of these lesions are due to the diffusible toxins of the bacillus typhosus. There are other locations of the bacillus, such as the bone-marrow, but to consider them would carry the paper too far.

**Paratyphoid Fever.**—Dr. Nathan E. Brill of New York said that some years ago he had the opportunity to study in Mt. Sinai Hospital a series of cases which, while resembling typhoid fever in many respects, had also many clinical points of difference. Since then there has come to be a general recognition of the existence of a so-called paratyphoid or paracolonic fever, though perhaps a better name than either of these would be pseudotyphoid fever. Bacteriologists have been able to differentiate various bacilli that caused these affections and present cultural and other peculiarities that differentiate them from the bacillus typhosus. The most prominent diagnostic sign is the failure of the Widal reaction and the presence of a reaction in the serum of the patients to cultures of micro-organisms resembling the typhoid fever bacilli but distinct from them. While the symptoms of paratyphoid are very similar to typhoid, there are distinct clinical differences. Usually the incubation period of the former disease lasts but three or four days and is followed by chilly feelings or a typical chill. Epistaxis is not rare.

Fever usually rises rapidly to 104° F. Within five days of morning and evening rise it has reached this maximum. The sensorium is dull and the patient is very apathetic. The patient is flushed and the upper part of the face in particular is red. There is a zone of white about the mouth. The eyes are dull, the tongue is moist and firm, and the furrows are white, with a slight reddish border along the edges. The brow is wrinkled, there is a sense of pain in the expression, and the patient usually complains of severe headache. At the end of the first week a series of red papules appear. There is nearly always some tympanitis. Constipation is the rule; diarrhea is rare. The patient is in a deeper apathy than in true typhoid fever, and is apt to be delirious in the evening. There are marked morning remissions. The fever continues for ten or twelve days, and then there is a sudden fall of temperature. The lysis of the fever never lasts more than three days, and there may be step-like descent during that time. Convalescence is not so slow as in typhoid. The emaciation is not as extreme as in typhoid, probably because paratyphoid usually does not last so long. Prostration is more marked than in typhoid fever, and this is one of the first complaints the patient makes. There is distinct leucopenia.

There is a second group of paratyphoid cases, in which the affection begins with a sudden chill, usually accompanied by rather sudden pains in the abdomen. The temperature rises in a day or two to 104° F. There is usually diarrhea, and the presence of mucus and some blood, though not to any alarming extent, in the stools. The prostration is marked, and the apathy extreme. The duration of the disease in this form is usually over two weeks. The extreme limits are from 10 to 84 days. Relapses take place in about 10 per cent. of the cases of paratyphoid fever.

**Typhoid Not an Independent Entity.**—Dr. Brill said in conclusion that typhoid fever is not a disease-entity, but evidently consists of a group of affections caused by specific microbes belonging to a series of micro-organisms that have many morphological and cultural similarities. Until the bacteriologists have solved the problem of the number of these diseases and the distinctions between them, the clinician must wait in patience, observing the differences that characterize them, though many of the symptoms belong in common to all the members of the group.

**Arteritis in Typhoid Fever.**—Dr. W. S. Thayer of Baltimore said that until very recently it has not been realized that typhoid fever may attack the linings of arteries and give rise to inflammatory disturbances, followed by thrombosis and the clinical symptoms attending this lesion. He described some cases that have been recently under observation at Johns Hopkins. A young woman of twenty-two, in the ninth day of a typhoid fever, was taken with general convulsions. These were repeated for an hour, and during the time the patient was profoundly unconscious. Four hours later the convulsions returned. Afterwards they were noted at intervals of six hours. The case ended fatally. Autopsy showed the existence of early ulcers of the intestine with typhoid bacilli present in the spleen, kidney, heart and liver. There was thrombosis of the left middle cerebral artery. The arteries showed periarteritis, and there were inflammatory changes also in the smaller arteries but without any thrombi, so that evidently the arteritis was a preliminary to the thrombosis.

**Femoral and Other Thrombosis.**—A boy of sixteen was admitted on the fifth day of severe typhoid fever, after being delirious from the outset. On the eleventh day there was a complication at the left apex, and on the twelfth at the right base. The following



day the left foot and leg remained white and cool, although there was no swelling. Later the heel and popliteal space became purplish in color, and then swelling set in. The whole leg became discolored, and an irregular line of demarcation followed. No pulsation could be felt below the middle of the thigh. The leg became purplish and green, and the toes became mummified. During this time the pulmonary signs cleared up. Dr. Thayer detailed two other cases, one in a young man on the seventh day of a relapse of typhoid fever, followed, however, by complete recovery. The other in a school-teacher in whom blood-pressure tests had been taken several times, and who developed swelling and tenderness in the arm. It is evident that some of the old reported cases of aphasia and paralysis during typhoid fever were really due to these arteritic complications.

**Modern Treatment of Typhoid Fever.**—Dr. Gilman Thompson said that the so-called antiseptic treatment of typhoid fever was founded on the theory that the disease was always accompanied by intestinal lesions. This is now known not to be true in all cases. There are other objections. First, it is difficult to kill typhoid bacilli without injuring the delicate cells of the intestinal mucous membrane. Secondly, antiseptics become changed and diluted in the stomach and intestines, and consequently do not act always as they do outside the body. Thirdly, the typhoid bacilli exist in the lymph-structures and cannot be reached unless the antiseptic is absorbed. Fourthly, we now know that bacilli are much more widely dispersed than has been thought. In over 80 per cent. of the cases typhoid bacilli can be found in the blood.

**Drug-treatment.**—The initial use of calomel for typhoid fever is excellent. Daily doses of calomel, as advised by some, are a source of *salivation*, not *salvation*, for the patient. The great danger in the disease is the occurrence of tympanitis. This stretches the floor of the ulcers and gives rise to the danger of perforation or hemorrhage. As soon as the collection of gas is noted there should be a change of diet. Where constipation exists, small doses of bitter water can be given with advantage, and a rectal tube inserted in order to remove the gas. The two best remedies are sodium sulphocarbolate and turpentine. The latter has maintained its reputation for many generations. If the stools are very fetid the colon should be cleansed by an enema. There should be no medication unless there is some distinct indication for it. As patients take only liquid food, care should be taken to keep their mouths clean by means of hydrogen peroxide. There is no need of antifermentative drugs unless constipation and tympanitis show themselves. Plenty of water should be administered of the temperature the patient wishes. This lessens the constipation and dilutes the toxins in the circulation. In this way the kidneys are spared some of the strain that is brought on them and the patient is rendered more comfortable.

**Hydrotherapy.**—The Brand method is unfortunately applied by many physicians in a half-hearted way. Its principal indication is not so much to reduce temperature as to stimulate the nervous system. The patient's restlessness, or nervous condition is a better index of the need for a bath than is the thermometer. The sudden cold plunge gives the best stimulus possible for the nervous system. It gives much more satisfaction than sponging. There is often more complaint of cold from sponging than from tubbing. The bath gives the patient rest and reduces the mortality. For insomnia the bromides, with small additions of cocaine, are better than opiates, and they do not lock up the secretions.

**Hemorrhage.**—The first sign of hemorrhage may be noticed as long as 12 hours after the hemorrhage has really occurred. If it is once repeated no food should be given by the mouth, but two or three ounces of food may be administered by the rectum at intervals. If hemorrhages continue in slight amounts for a considerable period, then the patient should not be starved, but predigested food should be administered. In Dr. Thompson's experience suprarenal extract has done good, especially in early hemorrhages. It is not of so much service in late hemorrhages. In some cases it is a signal failure. The use of the ice-bag is contraindicated. It does not stop peristalsis, and as it drives the blood from the surface to the body it rather adds to the internal congestion and encourages lesions. If there is collapse and loss of blood normal salt solution should be injected subcutaneously. At the Presbyterian Hospital, salt solution is kept constantly warm by means of the thermostat when typhoid fever patients are in the house.

**Variety of Diet.**—It is not necessary to keep patients absolutely on a milk diet. Where the taste of milk is objected to, vichy or small amounts of coffee may be added to flavor it. Beef, mutton and chicken broths can be employed with perfect safety. The use of milk alone is apt unduly to protract the convalescence. Increase the diet as soon as the patient's temperature sinks below 100° F. Junket and scraped beef are the first additions to be made. When milk is being given in large quantities look for coagulated milk in the stool. Hard coagula may prove quite as irritant as any form of solid food. With ordinary care, under favorable circumstances, 93 per cent. of typhoid-fever cases will recover.

**Complicated Case of Typhoid.**—Dr. Albert W. Preston of Middletown described a patient who suffered from several relapses of typhoid fever. Besides this, in the ninth week edema was noticed in the limbs, and suppression of urine took place. In the tenth week a pleural effusion occurred. The pulse rose to 175, the patient was tapped three times and hemorrhagic fluid was removed. On the one hundred and fifteenth day there was stupor and great weakness from persistent toxemia. Despite all these symptoms the patient recovered.

**Serum Diagnosis.**—Dr. S. J. Meltzer of New York, in opening the discussion, said that the solution of blood dilution of blood serum used by the Board of Health, namely 1-20, is too low to exclude certain mixed infections that may occur alongside of typhoid. He said that the study of immunizing bodies, the lysins, precipitins and agglutins, showed that as different animals were grouped in reactions to injections of various sera, so bacillary groups were also related to one another and might in low dilutions cause reciprocal agglutinations.

Dr. E. Libman said that paratyphoid fever is due to an essentially different organism from the bacillus of typhoid fever. The colon bacillus coagulates milk and thus differs from the typhoid bacillus and the paratyphoid bacillus is differentiated from both by the production of gas and glucose. Another distinction is the secondary alkalinity that sometimes occurs as the result of their growth. Mixed infections are not improbable in certain cases, and would be extremely hard to differentiate.

**Acetozone.**—Dr. Thornton of Buffalo said that the new drug acetozone seemed to be of excellent service in typhoid fever. It has a decided antifermentative action that prevents many of the intestinal symptoms of typhoid. It is almost a specific in its favorable effects. It causes the affection to run a milder course,

and seems distinctly to abbreviate it. About six grains should be dissolved in two quarts of water, making a solution of 1-5,000, and it is then given to the patient to drink ad libitum, about this amount being consumed each day. It has been found of decided benefit in the United States service at the post near Buffalo.

**Serum for Paratyphoid Diagnosis.**—Dr. Camac said that the serum for the diagnosis of the paratyphoid fevers may be taken in small capillary tubes with a bulb at the center. This may be tested with perfect satisfaction at any distance.

Dr. W. H. Thayer, in closing the discussion, said that the careful use of the serum-tests will undoubtedly facilitate the differentiation of many fevers formerly considered typhoid. There seems no doubt that present investigations will enable the profession to understand what is the mechanism of cell-reactions to bacterial products by which blood-equilibrium is disturbed and arteritic conditions established, which eventually lead to thrombosis.

#### FOURTH DAY—OCTOBER 23.

**Advantages of Nitrous Oxide.**—Dr. H. W. Carter of New York said that nitrous oxide can be used with distinct advantages in many operations in general surgery. It gives the patient much less inconvenience and is decidedly less dangerous. He exhibited a special form of stop-cock by which the gas can be administered with various percentages of oxygen, so as to secure narcosis for long periods without risk. The stop-cock has the advantage of valves that are not acted upon by the gases and that are enduring.

**Standard Technic in Surgery.**—Dr. Edward Wallace Lee of New York said that there is need of a standard of technic for asepsis and antisepsis in surgery. Each operator now commends his own method, though at times they are contradictory of those employed by others. True progress in this matter would seem to demand the institution of some standard of methods.

Dr. Ochsner of Chicago said that 4,000 years ago the Chinese came to do things with such perfection that they established their methods of that time as standards and have continued to do things that way ever since. There are those, however, who do not see any decided advantage in following the Chinese in this matter.

Dr. Mayo said that he was not satisfied with his own methods as yet, and was glad that others differed from him, because he frequently secured valuable points from them. Uncertainty leads to investigation and informing experiment.

Dr. Walsh said that when Lord Lister, who is the son-in-law of the distinguished English surgeon, Symes, announced his intention of taking up surgery as a specialty, his father-in-law is said to have discouraged him, because there was no future in surgery. Everything that could be done had been done, according to the old surgeon, and there was no prospect of evolution in the art and practice that would make it worth while as a man's life-work. Lord Lister has absolutely revolutionized the practice of surgery, notwithstanding the warning of the well-intentioned old surgeon. The introduction of standards would almost surely hamper progress.

**Emergency Hemorrhage Medical.**—Dr. Dawbarn of New York said that emergency hemorrhage is always serious. The older a surgeon is the more he fears the loss of a drop of blood. Medical hemorrhage consists of those cases in which no direct compression can be applied. For hemoptosis ergot and the various internal styptics are of very little service. Aconite may be used with advantage if the heart-beat seems too strong. The most important procedure for uncontrollable pulmonary hemorrhage, however, is the cording

of the limbs. A towel should be knotted tightly around three of the limbs and then twisted until the circulation is stopped, the evidence of which will be the occurrence of swelling. This must be kept up until the patient is somewhat faint. After half an hour the fourth limb should be corded and one of the others gradually loosened. The same thing should be done for apoplexy. The family should be told how to apply the Spanish windlasses to the limbs. Lives have been saved in cut throats and opened wrists because of the fainting that results, giving an opportunity for clotting to take place.

**Emergency Hemorrhage Surgical.**—Nosebleed takes place from one of the two arteries of the septum, usually the lower one, and can often be stopped by occlusion of the artery. For this purpose a hairpin may be used as a dilator and the bleeding-point in the artery may be cauterized by another hairpin, heated red-hot. The application of adrenalin or of 10 per cent. gelatin may also be of service. When the upper artery of the septum bleeds it may be necessary to plug the nose. For this a rubber catheter is inserted along the floor of the nostril, and when seen in the pharynx is pulled out through the mouth. The Bellocoq cannula is pictured in the text-books, but is used no more. By means of the catheter a double cord is pulled through the nostril, leaving the ends projecting from mouth and nose. In order to stop hemorrhage ordinary cotton-batting should be employed. It should be boiled beforehand, in order to make it aseptic. Absorbent cotton and absorbent gauze invite bleeding. A piece of cotton of the size of the pharynx should be drawn behind the soft palate. This structure may be brought forward in emergencies by a bent spoon. It is better to flood both choanae than to attempt to fill up only one. Then with the patient on the back, weak tea or a gelatin solution should be poured into the anterior nostril. If the tampon at the back is properly put in, the level of the liquid will not sink. Its presence of itself will serve as a styptic. The secondary plug should be put in the anterior part of the nose and tied in by means of the skin with sufficient firmness, so that the nose is forced over a little. This produces discomfort, but an opiate will relieve it.

**Hemophilia.**—Cases of bleeding in this diathesis give the most trouble. The most recent treatment, and one that has been used with good success, is to bring normal blood in contact with the tissues. After the posterior plug is put into the nose, and its efficiency has been tested by the water-seal, blood from another person or from an animal should be poured into the nostril. Alien blood causes rapid dropping, and the clots are firm and occlude the bleeding vessels.

In the discussion Dr. Simpson of Pennsylvania said that the best remedy for bleeding from the nose is the application of a 10 per cent. solution of adrenalin. This will nearly always prove effective. There are certainly some cases in which it has failed.

Dr. Ochsner observed that Dr. Dawbarn's methods commended themselves by their simplicity and directness.

**Whites of Eggs in Hemophilia.**—Dr. Ochsner said that it is worth while trying a recent suggested method for lessening the tendency to bleeding in bleeders' disease. This consists in using large quantities of the white of eggs. The whites of four to six eggs should be given three times a day. This albuminous material seems to have a good effect on the clotting properties of the blood, and so prevents the uncontrollable hemorrhage which so often occurs in these patients. Dr. Ochsner continued that Mayo Robson suggested dram doses of calcium chloride three times a day, given in plenty of water, as a treatment for the hemorrhage which so often proves uncontrollable in cholemia. The



drug may be given every four hours for four or five days before operation by the rectum.

Dr. Mayo said that he has tried calcium chloride where he feared cholemic hemorrhage, and so far has not been disappointed in it. Before its use, whenever he operated upon gall-stone cases that exhibited signs of purpuric spots the patients died from hemorrhage. He has had no deaths since the use of calcium chloride, but so far he has not dared to operate where purpura existed.

**Bacteriology of Pneumonia.**—Dr. A. C. Abbott of Philadelphia reviewed the bacteriology of pneumonia from the time when Juergenson first taught that pneumonia was a specific infectious disease through the period when Friedlander's bacillus was for a time accepted as the specific cause, until the discovery of Sternberg, Pasteur, A. Fraenkel and Weichselbaum showed the causative influence of the pneumococcus. Welch found the pneumococcus present in 10 successive cases. There are many secondary infections liable to be concurrent with pneumonia. Remote organs may be affected by the streptococcus. The micro-organism occurs in the blood oftener than has been thought. The recent attempts to make curative or prophylactic sera have not as yet reached the stage where much practical good can be looked for from them.

**Leucocytosis in Pneumonia.**—Dr. Alexander Lambert said that a small leucocytosis in pneumonia may mean a very light attack of the disease or one of extreme severity with unfavorable prognosis. Usually there is a leucocyte count of 20,000 or more, higher according to the number of lobes affected. The leucocytosis must be taken daily to get the prognosis of the case, and this is difficult for the practitioner. There is no ratio between the fever and the number of leucocytes. The persistently low leucocytosis, 3,600 or less, is nearly always fatal. Persistent dropping of the leucocyte count looks suspicious. The practical value of the leucocyte count in pneumonia will probably be its diagnostic import with regard to empyema. This has been considered a sequela rather than a complication. But it seems to occur during a course of the pneumonia itself. A sudden doubling of the leucocyte count usually means the occurrence of a purulent complication in the thorax, and demands further investigation. In four cases under Dr. Lambert's care, without any change in the physical signs, the use of an aspirating-needle showed the presence of empyema when it could not otherwise have been suspected.

**The Finsen Ray.**—Dr. Francis P. Kinnicut of New York reviewed some of the therapeutic effects of light as it has been investigated by Finsen. The protection of smallpox patients from actinic rays shortens the course of the disease and often prevents the occurrence of suppuration. It does not prevent death that might occur from the severity of the smallpox before the suppurating period. Not only in smallpox has light been found very effective, but also in the treatment of lupus vulgaris and lupus erythematosus. In lupus vulgaris, particularly, it has proved successful where all other treatment has failed, and the patients are not liable to have recurrences of the disease. In other slow-running processes in the skin, as alopecia areata and rodent ulcer, light has also proved very effective. Dr. Kinnicut exhibited an apparatus for the light-treatment which he had procured in London. The light is surrounded by a water-jacket so as to prevent all heat from reaching the patient, and the lens is pressed tightly against the skin in order to produce ischemia. It has been found that when the blood is squeezed out of the tissues they react much better to light. There is a local reaction after each treatment, and if necessary the interval between treatments must be long enough to

prevent too much irritation. It takes a long time to produce good results, but this tediousness is the only objection. There is very little discomfort; the treatment itself is absolutely painless, and as the affections for which it is used, are very slow-running, it may well take time to cure them. Finsen himself considered that the light-rays are better than the X-rays for the treatment of very superficial lesions.

Dr. W. S. Gottheil said, in discussing the paper, that a lamp of the size presented by Dr. Kinnicut is entirely too small for effective work. It is of only eight to ten ampères, while it should be of 60 to 70 ampères, and a rock-crystal lens should be employed to concentrate the rays. He has used this larger form of apparatus himself on four cases of lupus erythematosus, and three of them have been cured.

**Glass Prevents Effect.**—Dr. Franklin said that the use of a glass lens will absolutely prevent the ultra-violet rays from passing, and as these are the most effective therapeutically, glass makes the apparatus of very little value. All known specimens of glass now on the market are practically impervious to ultraviolet light. Experiments are being made which may result in the manufacture of glass that can be used for this purpose.

**Finsen's Work in Copenhagen.**—Dr. Bulkley of New York said that he visited Copenhagen during last summer and saw the enormous number of cases under treatment in Finsen's phototherapeutic institute. The patients came from every country in Europe and also from this continent. The results obtained were beyond anything Dr. Bulkley had ever anticipated. This was especially true with regard to lupus vulgaris. It takes long—sometimes 500 hours of treatment. It is tedious, but it is effective. The light-treatment is not used exclusively. Lesions of the mouth and throat are treated by skilled laryngologists, and if irritation is set up the indicated ointments are employed. At times, under the influence of the light, small blisters arise, then an interval of a week is taken in the treatment.

**Mechanics and Physiology of the Roentgen Ray.**—Dr. Eden V. Delphey discussed the mechanics, the physiology and the pathology of the Roentgen rays. He said that the X-rays are not electric, but a higher wave-motion than light. Any form of energy that would bombard a metal plate in a vacuum would produce them. It happens that electricity is the most suitable agency for this purpose. The X-rays may be obtained from the static machine or from Ruhmkorff coils. The current from coils may be obtained in all weathers. The X-rays from this source, however, are more liable to produce burns and other secondary effects. The vacuum in the tubes employed for the X-rays often deteriorates and then the use of some chemical, usually potassium hydrate, is needed to raise the vacuum. Various automatic arrangements for this purpose are invented. The X-ray waves are too small to be reflected from any surface that we have so far been able to make. The smoothest surface is rough for them. They are not affected by refraction. The physiological effect of the X-rays is to cause increased dilatation of the blood-vessels, with exudation of serum and some inflammatory reaction. This hastens the metabolic changes in the tissues and so brings about improvement in chronic pathological processes.

**X-rays for Fractures.**—Dr. Carl Beck of New York showed by a series of radiograms that there are certain cases of recent fractures, as well as some of old ununited fractures, in which it is impossible to diagnose by ordinary physical examination the condition present. In these cases radiograms often prove a source of surprise by exhibiting something that is quite different from what was anticipated. The splin-

tering of bones particularly can only be properly recognized by X-ray examination. Combinations of lesions, as fractures and dislocations or fractures around or into a joint, make insoluble problems without them. Dr. Beck demonstrated the necessity for the use of the X-rays in the diagnosis of such cases.

**X-rays for Cancer.**—Dr. Charles Warrenne Allen of New York gave the details of the treatment of 50 cases of cancer. Patients were from 15 to 18 years of age, and 33 cancers were of the epithelioma rodent ulcer type. Ten were cancers of the breast, six recurrent, and one cancer en cuirasse. Of the 33 rodent ulcers five were fatal. Of all of these cases over 50 per cent. were discharged cured. In one case an epithelioma was treated that had developed as the result of an X-ray burn. Adjuvants to the treatments by the X-rays were freely employed. Where the cancer was superficial the base was curetted, and at times the surface covered with methylin-blue paint. At times, as the result of the breaking-down of tissue under the influence of the X-rays, products were absorbed, but gave some constitutional symptoms. Dr. Allen does not encourage the use of the X-rays except by those familiar with the difficulties and dangers of their use. Serious results may follow their incompetent application.

**The X-ray in Gynecology and Obstetrics.**—Dr. Eden V. Delphay said that for cancers of the genital tract the best advice would seem to be to remove as much as possible of the cancerous material, and then treat by means of the X-rays. For intracorporeal applications various forms of specula may be employed that screen off the effect of the X-rays except as regards the parts they are meant to act upon. Personally he has found the use of a sheet of celluloid in the vagina ample protection.

Dr. Joseph B. Cook of New York said that the X-rays do not give any better information in obstetrics than can be obtained from the ordinary methods of examination. Even with them there is no trace of the fetus to be seen in the living woman until the fifth month. They cannot be used therefore for early diagnosis of pregnancy. With regard to the diagnosis of the presentation of the fetus, there are too many disturbing elements to allow them to be of much service. Careful palpation will give more definite and more assured information.

Dr. Morton in opening the discussion said that a year ago this symposium on the X-rays in cancer would have been laughed at as a bid of the electrotherapeutists for attention. It is interesting to find how much has been accomplished in so short a time. Personally he is of the opinion that the X-rays will prove effective not only for recurrent carcinomata, but also for primary carcinomata. In applying the Finsen rays he has found the small lamp invented by Kjelsen very useful. This lamp has iron electrodes instead of carbons, and gives ultraviolet light in large quantities.

**Combination of X-rays and Finsen Rays.**—Dr. Kinnicut said that in rodent ulcers with indurated and rolled-up edges the combination of the Finsen rays and the X-rays have been found more effective by English observers than either of these therapeutic agents alone. Dr. Kinnicut also presented a tube made of leaded glass, through which the rays passed only at the end absolutely protecting all other parts.

**X-ray Uncertainties.**—Dr. William B. Coley said that he had treated with the X-rays at the General Memorial Hospital 68 cases of malignant disease. Some excellent results were obtained, but recurrences after the cessation of the treatment are not unusual. It is not yet time to announce results as definite. He presented two cases of especially malignant sarcomata that seemed hopeless, yet had been improved so much under X-ray treatment that a radical cure seemed promised.

## BOOK REVIEWS.

**THE SCHOTT METHODS OF THE TREATMENT OF CHRONIC DISEASES OF THE HEART.** With an Account of the Nauheim Baths, and of the Therapeutic Exercises. By W. BEZLY THORNE, M.D., M.R.C.P. Fourth Edition. P. Blakiston's Son & Co., Philadelphia.

THE fact that this is the fourth edition of a monograph on so specialized a subject as the Schott method of treating heart-disease is of itself a sufficient index of the attention the book has attracted. The medical world is agreed that the Schott brothers accomplished more for certain forms of heart-disease than any one else in the present generation. Dr. Bezly Thorne's book is simply a faithful description of their methods by one who studied under them and has employed them himself. The book is well worth the reading, and contains suggestive material even for those who may not send patients to Nauheim. The Schott method of resistive exercises may well be employed in any part of the world with good effect. For those who see much of heart-disease the book will be valuable.

**THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS.** Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly Under the General Editorial Charge of GUSTAVUS P. HEAD, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume IX. PHYSIOLOGY; PATHOLOGY; BACTERIOLOGY; ANATOMY. Pathology Edited by W. A. EVANS, M.S., M.D., Professor of Pathology, College of Physicians and Surgeons, Chicago. Bacteriology Edited by ADOLPH GEHRMAN, M.D., Professor of Bacteriology, College of Physicians and Surgeons, Chicago. August, 1902. The Year Book Publishers, Chicago.

IN this volume the chapter on physiology contains an excellent discussion of certain recent advances in our knowledge of immunity and protection, as also of the reaction that takes place within the body when various foreign substances are introduced. For those who find it difficult to understand some of the references in recent medical literature to Ehrlich's explanation of the mechanism of immunity, the remarks on the antitoxins, and the antibodies generally, the precipitins, the agglutinins, the lysins and the cytotoxins will be especially informing. The chapter on pathology contains a discussion of more recent important papers with regard to the cause of cancer. The pages devoted to bacteriology contain a more detailed account of recent work in immunity and protection.

## BOOKS RECEIVED.

*The MEDICAL NEWS acknowledges the receipt of the following new publications. Reviews of those possessing special interest for the readers of the MEDICAL NEWS will shortly appear.*

**TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK, 1902.** 8vo, 526 pages. The Society.

**DISINFECTION AND DISINFECTANTS.** By M. J. Roseman, M.D. 12mo, 353 pages. P. Blakiston's Son & Co., Philadelphia.

**A NURSE'S GUIDE FOR THE OPERATING ROOM.** By Dr. N. Senn. 8vo, 127 pages. Illustrated. W. T. Keener & Co., Chicago.

**HISTOLOGY AND MICROSCOPIC ANATOMY.** By Dr. Ladislaus Szymonowicz. Translated and Edited by John Bruce MacCallum, M.D. 8vo, 435 pages. Lea Brothers & Co., Philadelphia and New York.